Final
Prioritization and Closure Schedule for HB 1205 Disposal Areas

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Commonwealth of Virginia

Department
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TABLE OF CONTENTS

Figures

Tables

Appendices

Virginia Department of Environmental Quality
Final Prioritization and Closure Schedule for HB 1205 Disposal Areas

Background

The Virginia Waste Management Act, at Va. Code § 10.1-1413.2, establishes the "Virginia Landfill Clean-up and Closure Fund" and directs the Virginia Department of Environmental Quality (the "Department") to prioritize landfills in need of grants based on the greatest threat to human health and the environment. In its 2000 session, the Virginia General Assembly amended subsection B of § 10.1-1413.2 by adding the following language (2000 Acts c. 308):

> The Department shall establish a schedule, after public notice and a period for public comment, based upon that prioritization requiring municipal solid waste landfills to cease accepting solid waste in, and to prepare financial closure plans for, disposal areas permitted before October 9, 1993. No municipal solid waste landfill may continue accepting waste after 2020 in any disposal area not equipped with a liner system approved by the Department pursuant to a permit issued after October 9, 1993. Notwithstanding the provisions of subsection N of § 10.1-1408.1, failure by a landfill owner or operator to comply with the schedule established by the Department shall be a violation of this chapter.

Appendix A of this document contains a more detailed chronology of the legislative and regulatory actions preceding the enactment of 2000 Acts c. 308. Subsection N of Va. Code § 10.1-1408.1, cited in the Act, allowed landfills permitted before March 15, 1993, and upon which solid waste had been disposed of prior to October 9, 1993, to continue to receive solid waste until the landfills reached their vertical design capacity, provided that the facility was in compliance with the requirements for liners and leachate control in effect at the time of permit issuance, and upon meeting certain other conditions. Landfills operating under that subsection are commonly called "HB 1205 landfills," after the bill of the 1993 General Assembly that added subsection N to § 10.1-1408.1.[1]

This Final Prioritization and Closure Schedule for HB 1205 Disposal Areas ("Final Prioritization" or "Prioritization") presents the Department's prioritization of the disposal areas of HB 1205 landfills affected by the 2000 legislative amendments.[2] The Prioritization includes the schedule for disposal areas that were permitted before October 9, 1993, to cease accepting solid waste. Owners or operators of the affected disposal areas are required to prepare financial closure plans for those areas. Pursuant to statute, the Department gave public notice and allowed two periods for public comment before establishing this Final Prioritization.

[1] This Prioritization, however, is not strictly limited to disposal areas continuing operation under HB 1205. The statute requires a schedule to be established for all disposal areas permitted prior to October 9, 1993, to cease accepting waste, whether operating pursuant to Va. Code § 10.1-1408.1 N or otherwise.

[2] The Prioritization affects only disposal areas permitted before October 9, 1993. HB 1205 landfills may have other disposal areas permitted after that date that have liners designed to meet current regulatory standards. These areas are not affected by the statute or the Prioritization.

Description of Prioritization Model

Sites[3] pose threats to human health or the environment when receptors are exposed to hazardous constituents[4] from the waste disposed of at the site. Receptors include humans, animals, and plants. They may be exposed to waste on the site, or to hazardous constituents that are released from the site and migrate via one of several pathways. These on-site and off-site pathways are soil, air, ground water, and surface water. For exposure to occur, the pathway needs to be complete, including: a release on or from the site; a viable route of transport; and exposure to a receptor. The model used in this Prioritization ("model") uses site-specific conditions and the site's unique environmental setting to assess, or score, the pathway factors (release, route, receptor) over each of the pathways (soil, air, ground water, surface water). The model results in a qualitative assessment; throughout, it uses only three categories – *high*, *medium*, and *low* – to score the pathway factors and the pathways, and ultimately to prioritize the site itself. The Department believes that attempts to establish smaller increments of threat (as by listing all affected sites in serial order) would be less valid and counter-productive.

Individually, each pathway factor score reflects the likelihood that a critical component of the pathway (release, route, or receptor) is complete. The model incorporates logical statements to score these three pathway factors consistently and objectively, using the site's unique conditions and setting as input. Next, an algorithm scores the pathway based on its three factors. This algorithm generally follows more formal risk assessment methods that quantify risks along complete pathways to receptors. The pathway score that results provides a relative measure of the threat associated with that pathway. Another algorithm combines the four pathway scores for each site (soil, air, ground water, and surface water) to provide an estimate of the threat associated with the site relative to other sites scored in this Prioritization.

The model is similar to other ranking or prioritization protocols generally in use, for example: EPA's Hazard Ranking System (HRS)[5], the Department of Defense's Relative Risk[6], and EPA's Risk Assessment Guidance[7]. Aspects of those approaches have been used in this model to achieve a streamlined, qualitative scoring procedure. Although the model applies certain risk assessment principles, no toxicological assessments have been performed, since consistent data for such assessments is not available for all sites. However, by applying the model consistently to a group of sites, the results are a measure of the relative threat among the sites. Thus, the

[3] "Sites" include landfill disposal areas that are subject to this Prioritization, unless the meaning in context is clearly otherwise.
[4] "Hazardous constituents" include constituents listed in Part V, Appendix 5.1 of the *Virginia Solid Waste Management Regulations* 9 VAC 20-80-10 et seq. (2001).
[5] *National Oil and Hazardous Substance Pollution Contingency Plan*, 40 CFR Part 300.
[6] *Relative Risk Site Evaluation Primer*: U. S. Department of Defense, March 1996.
[7] *Risk Assessment Guidance for Superfund - Volume I, Human Health and Evaluation Manual (Part A)*, EPA/540-1-89/002, December 1989, as supplemented by OSWER Directive 9285.6-03 (March 25, 1991), and EPA Publication 9285.7-08 (May 1992).

model can be used to prioritize sites based on greatest threat to human health and the environment.

Scoring Pathway Factors

The model incorporates logical statements to score the pathway factors consistently and objectively. The statements, which are based on applicable or relevant rules and guidelines, use site-specific conditions and the site's unique environmental setting as input. In this context, site-specific conditions include: facility type and operational status; whether there are complete liners and/or leachate collection systems; whether ground water or gas monitoring programs indicate that releases have occurred; and the effectiveness of any corrective action programs. Information relevant to assessing the site's unique environmental setting includes: the distance to the nearest off-site structure; the distance to the nearest residence (or school, hospital, nursing home, or recreational park); the ground water area; the distance to the nearest well or spring; the distance to the nearest flowing stream; the distance to wetlands; the size of the potentially affected aquatic environment; and the distance to a surface drinking water source located downstream from the site. Appendix B documents the Pathway Factors' Evaluation Criteria for the three pathway factors for each of the four pathways.

The Release Factor

Figure 1 identifies evaluation criteria and illustrates the sequential process used to score the release factor for each pathway. These factors depend mainly on criteria related to site conditions; they are scored *high* for site designs that fail to include applicable or relevant containment features. For an active disposal area, the existence of base liners and/or leachate collection systems underlying the entire site affect the scores of two pathway release factors. However, regardless of the containment system, if site monitoring data indicates a release has occurred to one or more pathways, this factor is scored *high* for the affected pathway(s), unless effective corrective measures have been implemented.

Part V of the Virginia Solid Waste Management Regulations, 9 Virginia Administrative Code (VAC) 20-80-240 through 310[8], establishes siting standards (including minimum setbacks to various features), and design, monitoring, and corrective action requirements for landfills in Virginia. Such applicable or relevant rules are used in the scoring process.

The Route and Receptor Factors

Table 1 identifies setbacks and target limit distances to land-based features applicable or relevant to landfills. These features of concern include off-site residences and other structures, wells and springs, wetlands, and flowing streams. In most cases, critical intervals can be used to identify

[8] *Virginia Solid Waste Management Regulations*, 9 VAC 20-80-10 et seq. (2001).

whether a feature is so close as to trigger heightened concern (i.e., result in a *high* pathway factor score), or is far enough away to be of little concern (i.e., to score *low*). Features that fall in between receive a *medium* score. In general, the distance criteria are based on measurements from the site's waste management unit boundary.

Figures 2a and 2b include the Department's *Ground Water Map of Virginia* and the location of the affected sites.[9] It is used to determine the ground water route factor. Information found on the map summarizes ground water supplies available and pollution potential of each of the ten designated ground water areas across the Commonwealth. Considering this data, four of the ground water areas are designated to have a *high* ground water route factor. These ground water areas are Mountainous Terrain, Carbonate, West Toe, and Coastal Plain. The remaining six areas have a *medium* ground water route factor. These are Cumberland Plateau, Ordovician Shale, Blue Ridge, Triassic Basin, Piedmont, and Fall Zone. Scores are limited to just two categories because otherwise the model might be too non-conservative; if an area were assigned a *low* route factor, no sites in it would ever score *high* on the ground water pathway (see "Scoring the Pathways," below).

The distance to a surface drinking water source is measured starting from the point where a release from the site would enter the stream to the next public water intake downstream from the site. The aquatic target length reflects the size of the aquatic environment that could be adversely affected by releases from the site. It is measured from the point where a release would enter the stream to the next significant downstream confluence. In this case, the larger the aquatic target length, the greater the threat.

Other Considerations

Except for on-site contact with soils, the route and receptor factors inherently involve assessment of off-site features, typically into the surrounding environmental setting. Geographic Information System (GIS) software allows the user to obtain distances to features of concern. GIS information for features like roads, railroads, streams, wetlands inventory, and topographic images is invaluable. Specialty GIS coverage for information such as the *Ground Water Map of Virginia*, described above, can be developed as well. Distance and interval lengths applicable to each of the assessment features are determined and programmed into the model. This allows data to be input automatically from predefined lists, thus enhancing speed, accuracy, objectivity, and consistency. Where distance measurements were questioned or became an issue, the Department reviewed information supplied by the facilities and/or had its inspectors verify the measurements during visits to the facilities.

[9] *Ground Water Map of Virginia:* Virginia Water Control Board, Ground Water Program, 1985.

Scoring the Pathways

The pathway scoring algorithm scores a pathway based on its three factors (release, route, and receptor). However, due to uncertainty inherent in the qualitative parameters (e.g., *low* does not necessarily mean negligible), some question would remain whether the pathway is truly incomplete, even if one factor is *low*. Because of this, the algorithm is defined to be moderately conservative: if any factor is *low,* the pathway cannot be *high*; and if any factor is *high,* the pathway cannot be *low*. The algorithm is not based on a simple arithmetic average, but rather generally follows more formal risk assessment methods that quantify risks along complete pathways to receptors. The resulting pathway score provides a relative measure of the threat associated with that pathway. Figure 3 illustrates the Pathway Scoring Algorithm for all possible combinations of pathway factor scores. There are 27 combinations; seven result in a *high* pathway score, thirteen in a *medium* score, and seven in a *low* score.

To illustrate this scoring scheme, assume a *high* release factor for ground water. If either the route or the receptor factors score *low*, the ground water pathway may not be complete. Then, even with a *high* release factor for the pathway, the ground water pathway scores *medium.* On the other hand, if both the route and the receptor factors score either *high* or *medium,* then the pathway to the receptor is more likely to be complete, and the ground water pathway scores *high*. If the receptor factor were to score *high*, with the release or route factors scoring *low,* the pathway again is less likely to be complete, and a *medium* ground water pathway score results. Finally, if any one of the three pathway factors is *low* and none are *high,* then the pathway score would be *low.*

Prioritizing Sites

There are potential receptors along all four pathways, so each pathway could be critical. Simply designating the site priority as the maximum scored pathway -- whether soil, air, ground water, or surface water -- would be a method to establish a site score of *high, medium, or low* and prioritize each site. This maximum pathway method would be logical from a risk assessment perspective. If any one of the four pathways scores *high,* then the site would score *high.* However, because of the moderate conservatism in the scoring of pathways (described above), this method might lead to an overestimation of the relative threat posed by some sites. Alternatively, all four pathway scores can be used to establish a site score based on an average pathway method.[10]

[10] Either method can be supported by comparison to EPA's HRS. The hazard associated with each pathway is quantified as a score ranging to 100. The site hazard ranking score is computed as the root mean square of the four pathways: $HRS = \sqrt{\frac{Pathway1^2 + Pathway2^2 + Pathway3^2 + Pathway4^2}{4}}$. The cutoff score for inclusion on the National Priority List is 28.5. Considering this, first suppose a site has one pathway that tends to score *high* and the other three are *low*; its HRS would tend toward 50 (above the cutoff); the maximum pathway

In order to develop a qualitative averaging technique, consider the four pathways and that each has one of three possible scores: *high*, *medium*, or *low*. There are 81 possible combinations (3^4). If sequential integers were assigned to the *high*, *medium*, and *low* "values," and the average pathway score were computed for each possibility, then it can be shown that a site score (computed as an average pathway score) equal to the *medium integer* would result for almost one quarter of the combinations. The site score for the remaining combinations would split, with half falling below the *medium integer* (about three-eighths) and the other half falling above it (also about three-eighths).

Thus, a reasonable and objective prioritization of sites should result from making the following assignments: a *medium* site score to sites whose average pathway score equals *medium*; a *low* site score to sites with a lower average pathway score; and *high* site score to sites with a higher average pathway score. For example, a site with pathway scores of *high, medium, high,* and *low* would have a *high* site score (one *low* tends to cancel one *high*, but a *high* remains). A site with pathway scores of *high, low, high,* and *low* would have a *medium site score*. A site with pathway scores of *medium*, *medium*, *medium*, and *low* would have a *low* site score, and so on. In this Prioritization, the Department has used the average pathway method to obtain a site score for each disposal area. The site score is a measure of the relative threat to human health and the environment and has been used to prioritize the sites.

Public Comment and Response

Section 10.1-1413.2 of the Code of Virginia requires that the Department establish the schedule for closing affected disposal areas "after public notice and a period for public comment." There have been two such notices and comment periods.

In the July 17, 2000, *Virginia Register* (Volume 16, Issue 22, pages 2801-2802), the Department gave public notice and announced a public comment period for a Preliminary Prioritization and Closure Schedule for HB 1205 Landfills ("Preliminary Prioritization"). In addition, prior to publication in the *Virginia Register*, copies of the Preliminary Prioritization were mailed with an explanatory cover letter to each of the affected facilities. Following the public notice, the Department held six public meetings in different parts of the Commonwealth and held individual meetings with any facility that so requested. Comments made at these meetings were accepted as comment on the Preliminary Prioritization. In addition, the Department accepted written comments from any person until the close of business on October 13, 2000.

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method is comparable since a single high scoring pathway would be critical. Second, the root mean square operation is itself an averaging technique to obtain one representative score for a site; the pathway averaging method is comparable.

Upon review of the comments, the Department decided to revise the Preliminary Prioritization. Changes made in response to comments affected both the model used to prioritize sites and the data for individual facilities. Because of these changes, the Department decided that an additional public notice and period for public comment was appropriate. The Department prepared a Revised Prioritization and Closure Schedule for HB 1205 Disposal Areas ("Revised Prioritization"). In the April 23, 2001, *Virginia Register* (Volume 17, Issue 16, pages 2389-2391), the Department gave public notice and announced a public comment period for the Revised Prioritization. As before, copies of the Revised Prioritization were mailed to each of the affected facilities, and the Department again met with facilities that so requested. The Department accepted written comments on the Revised Prioritization from any person until the close of business on May 23, 2001.

The Revised Prioritization and its appendices detail the comments made during the first public comment period and the Department's responses. These are not being separately set out here. At the time of the Revised Prioritization, there were 37 active disposal areas that remained subject to Va. Code § 10.1-1413.2, and two of these facilities had entered into enforceable orders with the Department to close the affected disposal areas prior to 2007.

In response to the second public comment period, no changes have been made to the model used to prioritize sites. One site has demonstrated to the Department's satisfaction that all areas permitted before October 9, 1993, have closed, and that site has been removed from this Final Prioritization. By agreement, one facility that had previously been removed has been included in the Final Prioritization. In addition, the prioritization of several sites has changed as a result of changes to site-specific data, including the implementation of effective corrective measures to control landfill gas. Based on the revisions to the model and the inputs, 8 of these disposal areas are scored *high*, 18 are scored *medium*, and 9 are scored *low*. Final Site Score Sheets are included in Appendix C. A summary of public comments and the Department's responses has been included as Appendix D.

Results and Final Schedule for Closure

Pursuant to statutory directive, the Department prepared both a Preliminary and a Revised Prioritization. Notice of these documents was published in the *Virginia Register*, and an extensive series of meetings was held with the public and the affected facilities. Two periods of public comment were held. The Department responded to public comment by modifying both the model (in the Revised Prioritization) and the data for various sites. The model uses consistent, objective, and quantifiable inputs to assess the threat of the site, based both on common sense and other models in use, to reach a qualitative statement about the relative threat of the affected disposal areas.

No change has been made from the Revised Prioritization to the schedule of dates for facilities to cease accepting waste in their affected disposal areas: December 31, 2007, for disposal areas with a *high* site score; December 31, 2012, for disposal areas with a *medium* site score; and December 31, 2020, for disposal areas with a *low* site score.

There are disposal areas at 37 facilities that remain subject to Va. Code § 10.1-1413.2. Figure 2a displays the locations of disposal areas included in this Final Prioritization. Two facilities have entered into enforceable orders with the Department to close the affected disposal areas prior to 2007. Those orders remain in effect. As required by Va. Code § 10.1-1413.2, the remaining facilities shall cease accepting waste in any disposal area permitted before October 9, 1993, not later than the following dates: December 31, 2007, for disposal areas with a *high* site score; December 31, 2012, for disposal areas with a *medium* site score; and December 31, 2020, for disposal areas with a *low* site score. Nothing in this Final Prioritization shall affect the authority of the Director to establish an earlier closure date for any facility, as is otherwise authorized by law and regulation. Table 2 lists the facilities, summarizes the closure priority for their affected disposal areas, and establishes their closure dates. Appendix C provides individual score sheets for each site.

These facilities shall modify their financial assurance documentation, as necessary, in accordance with the Financial Assurance Regulations for Solid Waste Facilities, 9 VAC 20-70, as amended.[11]

[11] On September 14, 2001, the Virginia Waste Management Board approved an amendment to these regulations, including changing the title to "Financial Assurance Regulations for Solid Waste Disposal, Transfer and Treatment Facilities." The amended regulations will become effective following publication in the *Virginia Register*.

Figure 1. Scoring the Release Factor

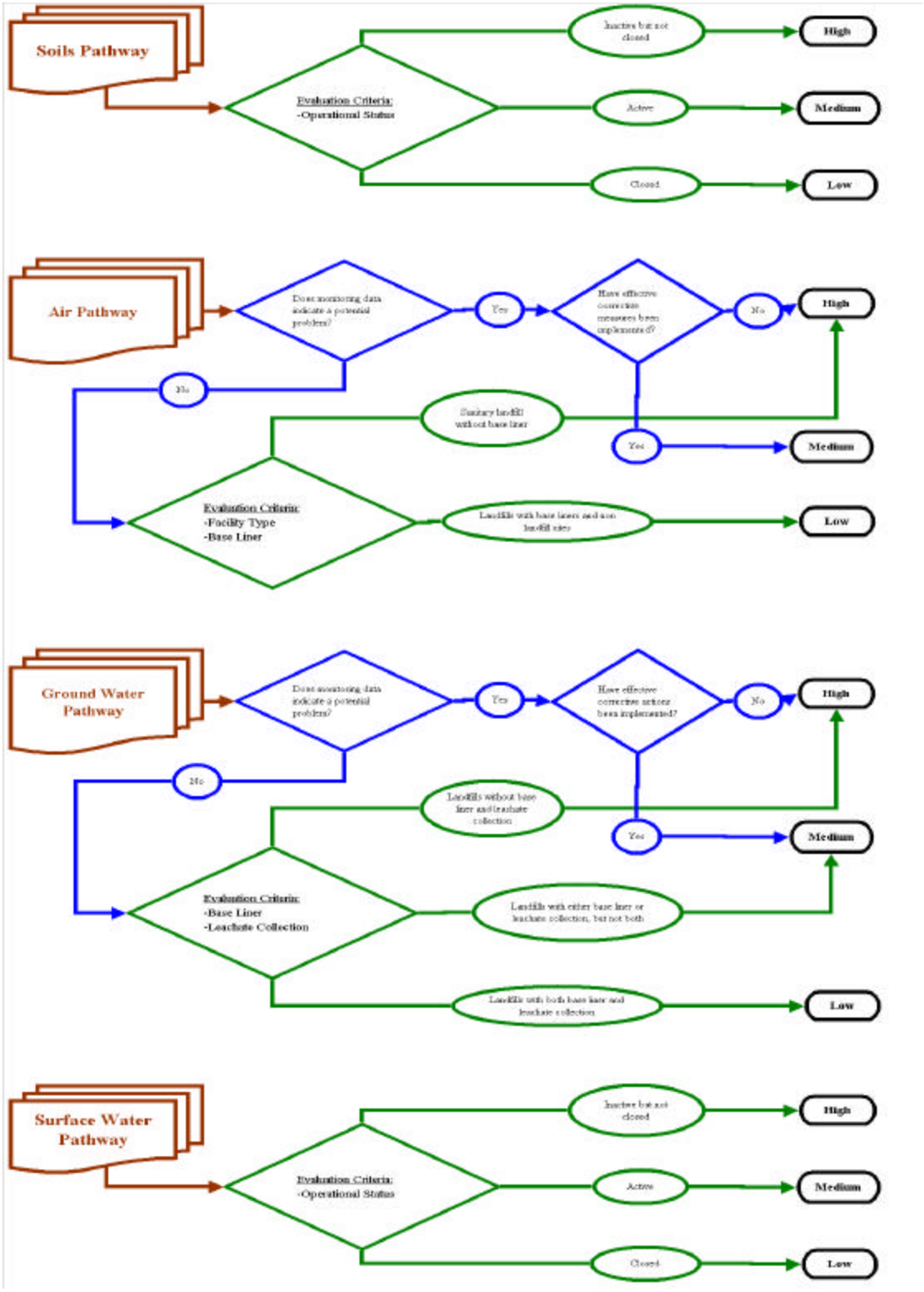
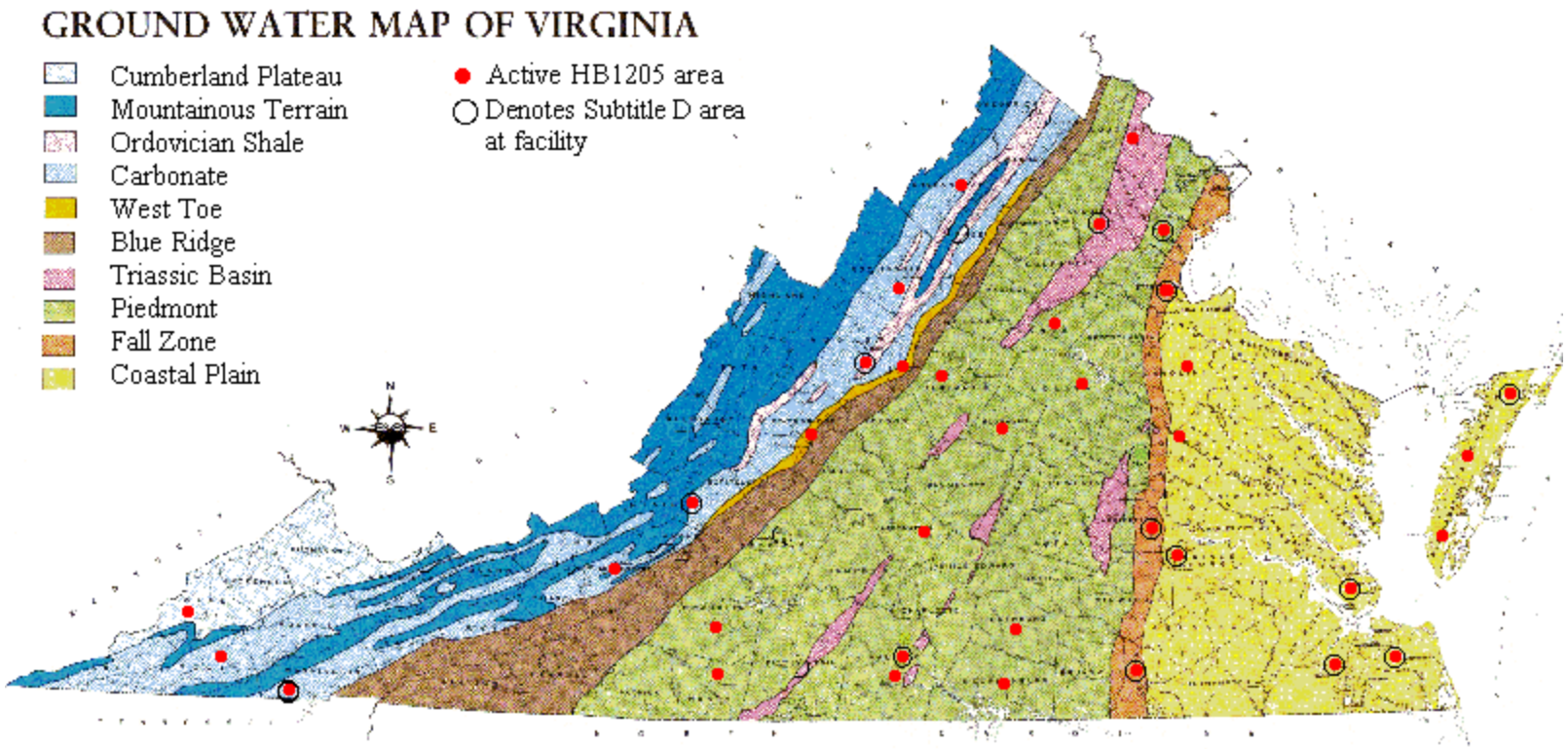


Figure 2a. Ground Water Map of Virginia and Location of Sites



Two sites, Stafford County Landfill (Permit 74) and Rappahanock Regional Solid Waste Management Board (Permit 589) plot together on the above map due to map scale and the proximity of the sites to one another. This map shows the general locations of facilities included in the Prioritization. As noted in the text, GIS information was used to obtain the site's ground water area.

Figure 2b. - Ground Water Map of Virginia Explanation

Cumberland Plateau Ground Water Area
- Nearly flat lying sedimentary rocks
- Small to moderate supplies available
- Generally poor quality water
- Moderate pollution potential

Mountainous Terrain Ground Water Area
- Folded, faulted sedimentary and carbonate rocks
- Relatively untested area with known moderate yields in alluvium and possible high yields in carbonate
- Quality varies from good in quartzites to hard in carbonates, to poor in shales.
- Low pollution potential, except along faults

Ordovician Shale Ground Water Area
- Predominantly shale units
- Small to moderate supplies available
- Generally hard water, high in iron and dissolved solids
- Moderate pollution potential

Carbonate Ground Water Area
- Folded and faulted carbonate rocks
- Moderate to large supplies available
- Generally hard water
- High potential for pollution in solution cavities and sinkholes

West Toe Ground Water Area
- Thick terrace and alluvial deposits
- Large supplies available
- Generally good quality
- Moderate pollution potential

Blue Ridge Ground Water Area
- Igneous and metamorphic rocks
- Small supplies available
- Generally good quality
- Moderate pollution potential

Triassic Basin Ground Water Area
- Sedimentary rocks with igneous intrusions
- Moderate supplies available
- Generally poor quality
- Moderate to low pollution potential

Piedmont Ground Water Area
- Igneous and metamorphic rocks
- Small to moderate supplies available
- Generally good quality
- Moderate to low pollution potential

Fall Zone Ground Water Area
- Thin unconsolidated sediments overlying basement igneous and metamorphic rocks
- Moderate supplies available
- Generally good quality
- Moderate pollution potential

Coastal Plain Ground Water Area
- Unconsolidated layered sediments
- Very large supplies available
- Generally good quality except some taste and odor problems, near the coast
- Moderate pollution potential; high pollution potential in the water table aquifer

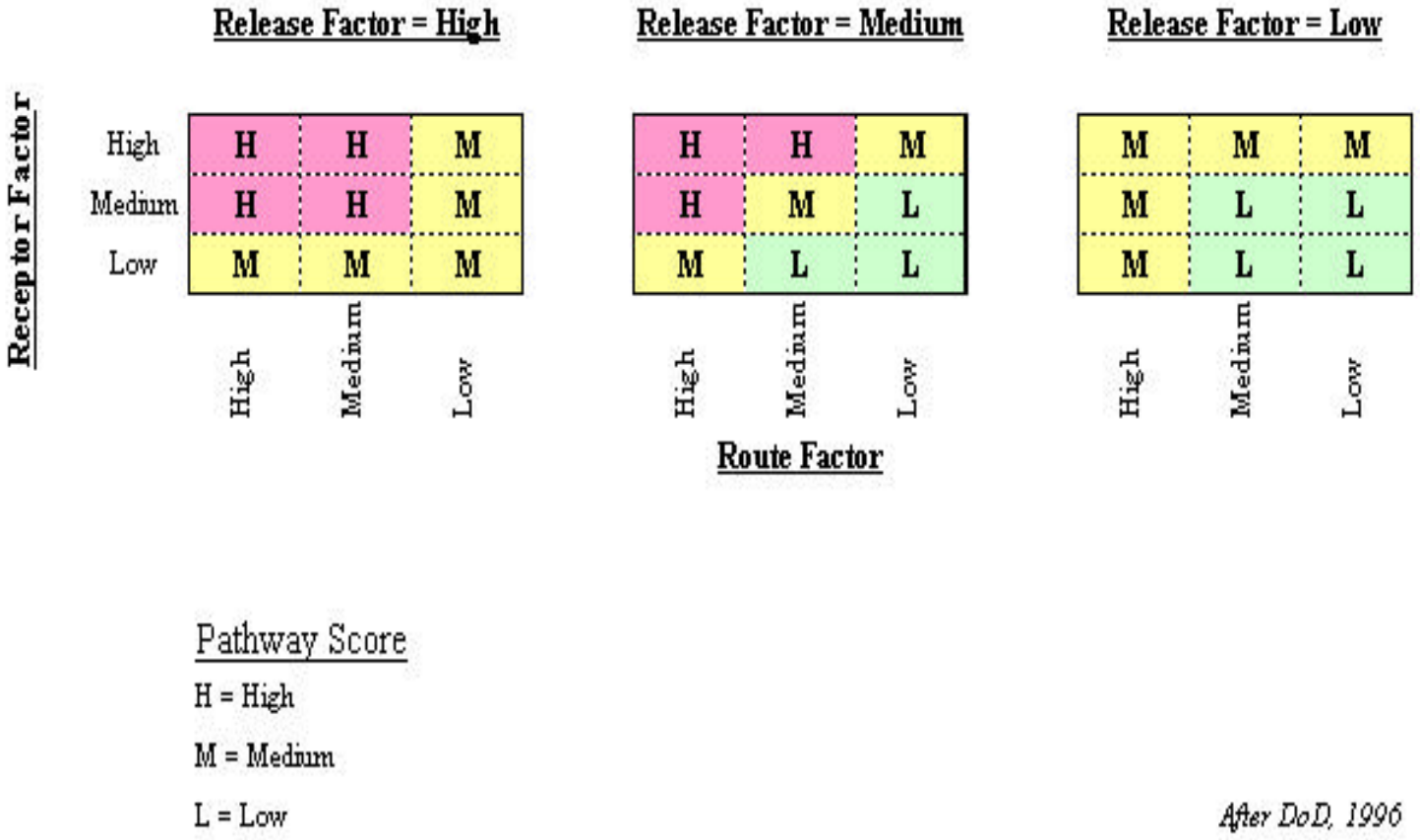


Figure 3. Pathway Scoring Algorithm

Table 1. Scoring Route and Receptor Factors

Feature	Citation	Criterion	Pathway	Factor	Score
Distance to Property Line	*9 VAC 20-80-250.A.7.b*	< 50 ft	Air	Route/Receptor	High
Distance to Structure	*9 VAC 20-80-180 B.8.a & 9 VAC 20-80-250.A.7.b*	< 50 ft	Air	Route/Receptor	High
	9 VAC 20-80-250.A.7.e	< 200 ft	Air	Route/Receptor	Medium
		> 200 ft	Air	Route/Receptor	Low
Distance to Residence, etc.	*9 VAC 20-80-250.A.7.e*	< 200 ft	Air	Route/Receptor	High
Ground Water Area	*Ground Water Area Map of Virginia (VWCB, 1985)*	One of 10 areas	Ground Water	Route	High, Medium
Distance to Well or Spring	*9 VAC 20-80-250.A.7.c*	< 500 ft	Ground Water	Receptor	High
	40 CFR Part 300 Appendix A § 3.0.1.2	< 4 mi	Ground Water	Receptor	Medium
		> 4 mi	Ground Water	Receptor	Low
Distance to Flowing Stream	*9 VAC 20-80-250.A.7.a*	< 100 ft	Surface Water	Route	High
	VA Code § 10.1-1408.4 B.2		Ground Water	Receptor	Low
	(twice setback)	< 200 ft	Surface Water	Route	Medium
		> 200 ft	Surface Water	Route	Low
Distance to Wetlands	*VA Code § 10.1-1408.4 B.2*	within/adjoining	Surface Water	Route/Receptor	High
			Ground Water	Receptor	Low
	VA Code § 10.1-1408.5 B	< 1 mi	Surface Water	Receptor	Medium
		> 1 mi	Surface Water	Receptor	Low
Aquatic Target Size (length)	*40 CFR Part 300 Appendix A § 4.1.4.3*	> 1 mile	Surface Water	Receptor	High
		< 1 mile	Surface Water	Receptor	Medium
		< 0.1 mile	Surface Water	Receptor	Low
Distance (down-stream) to Drinking Water Source	*VA Code § 10.1-1408.4 B.3*	< 5 mi	Surface Water	Receptor	High
	40 CFR Part 300 Appendix A § 4.1.1.2	< 15 mi	Surface Water	Receptor	Medium
		> 15 mi	Surface Water	Receptor	Low

Table 2. Summary of Results

No.	Site Name, Locality (Regional Office)	Pathway Scores				Site Score	Closure Date	Combo-Site
		Soil	Air	Groundwater	Surfacewater			
125	Charlottesville - Albemarle - Ivy, Albemarle (VRO).						09/01/01*	No
314	Hanover Co LF - 301, Hanover (PRO).						12/31/02*	No
21	Augusta Co Svc Auth, Augusta (VRO).	Medium	High	High	Low	High	2007	No
429	Fluvanna Co SLF, Fluvanna (VRO).	Medium	Medium	High	Medium	High	2007	No
92	Halifax Co SLF, Halifax (SCRO).	Medium	Medium	High	Medium	High	2007	Yes
49	Martinsville LF, Martinsville (WCRO).	Medium	Medium	Medium	High	High	2007	No
14	Mecklenburg Co LF, Mecklenburg (SCRO).	Medium	Medium	High	Medium	High	2007	No
228	Petersburg City LF, Petersburg (PRO).	Medium	Medium	High	Medium	High	2007	Yes
31	South Boston SLF, South Boston (SCRO).	Medium	High	Medium	High	High	2007	No
204	Waynesboro City LF, Waynesboro (VRO).	Medium	High	High	High	High	2007	No
91	Accomack Co LF - Bobtown South, Accomack (TRO).	Medium	Medium	High	Low	Medium	2012	No
580	Big Bethel Landfill, Hampton (TRO).	Medium	Low	High	Medium	Medium	2012	Yes
182	Caroline Co LF, Caroline (NRO).	Medium	Low	Medium	High	Medium	2012	No
149	Fauquier Co LF, Fauquier (NRO).	Medium	Low	Medium	High	Medium	2012	No
405	Greensville Co LF, Greensville (PRO).	Medium	Medium	High	Low	Medium	2012	Yes
29	Independent Hill LF, Prince William (NRO).	Medium	Low	High	Medium	Medium	2012	Yes
1	Loudoun Co SLF, Loudoun (NRO).	Medium	Low	High	Medium	Medium	2012	No
194	Louisa Co SLF, Louisa (NRO).	Medium	Medium	High	Low	Medium	2012	No
227	Lunenburg Co SLF, Lunenburg (SCRO).	Medium	Medium	High	Low	Medium	2012	No
397	Mid-county LF - Montgomery Co, Montgomery (WCRO).	Medium	Medium	High	Low	Medium	2012	No
507	Northampton Co LF - Oyster Site, Northampton (TRO).	Medium	Low	Medium	High	Medium	2012	No

Table 2. Summary of Results (cont.)

No.	Site Name, Locality (Regional Office)	Pathway Scores: Soil	Air	Groundwater	Surfacewater	Site Score	Closure Date	Combo-Site
90	Orange Co LF, Orange (NRO).	Medium	Medium	High	Low	Medium	2012	No
75	Rockbridge Co SLF - Buena Vista, Rockbridge (VRO).	Medium	Medium	High	Low	Medium	2012	No
23	Scott Co LF, Scott (SWRO).	Medium	Medium	High	Low	Medium	2012	No
469	Shenandoah Co SLF, Shenandoah (VRO).	Medium	Low	High	Medium	Medium	2012	No
587	Shoosmith Sanitary Landfill, Chesterfield (PRO).	Medium	Low	Medium	High	Medium	2012	Yes
417	SPSA Regional LF, Suffolk (TRO).	Medium	Low	Medium	High	Medium	2012	Yes
74	Stafford Co LF, Stafford (NRO).	Medium	Low	Medium	High	Medium	2012	No
461	Accomack Co LF #2, Accomack (TRO).	Medium	Low	High	Low	Low	2020	Yes
86	Appomattox Co SLF, Appomattox (SCRO).	Medium	Low	Low	Low	Low	2020	No
582	Botetourt County Landfill, Botetourt (WCRO).	Medium	Low	High	Low	Low	2020	Yes
498	Bristol City LF, Bristol (SWRO).	Medium	Low	High	Low	Low	2020	No
72	Franklin Co LF, Franklin (WCRO).	Medium	Low	High	Low	Low	2020	No
589	Rappahanock Regional Solid Waste Mgmt Bd, Stafford (NRO).	Medium	Low	Low	Low	Low	2020	Yes
62	Rockingham Co SLF, Rockingham (VRO).	Medium	Low	High	Low	Low	2020	No
398	Va Beach LF #2 - Mt Trshmr II, Virginia Beach (TRO).	Medium	Low	High	Low	Low	2020	Yes
513	Wise Co LF, Wise (SWRO).	Medium	Low	Medium	Medium	Low	2020	No

*Notes: Combination ("Combo") sites are landfills that have portions operating under HB1205 and portions that are Subtitle D compliant. The proposed closure dates apply only to those portions that are operating under HB 1205. Hanover County Landfill and Charlottesville/Albemarle-Ivy Landfill have both entered into enforceable orders with DEQ establishing closure dates. Hanover County has entered into a consent order with DEQ establishing a closure date of 12-31-02. A transfer station will then be operated adjacent to the landfill site. The Charlottesville-Albemarle-Ivy Landfill stopped accepting waste on 9/1/01. These orders remain in effect notwithstanding this prioritization closure schedule. Nothing in the Final Prioritization affects the authority of the Director to establish an earlier closure date for any facility, as is otherwise authorized by law.

Appendix A – Chronology of Legislative and Regulatory Actions

Chronology of Legislative and Regulatory Actions

With the promulgation of the Virginia Solid Waste Management Regulations (VSWMR) in 1988, solid waste management facilities in Virginia became subject to extensive new requirements. These new requirements addressed such elements as landfill siting, liner and leachate collection systems, operational requirements, ground water monitoring, and closure and post-closure care requirements. Under the 1988 regulations, owners and operators of permitted solid waste management facilities were required to comply with the new requirements by July 1, 1992. The regulations required that after July 1, 1992, existing landfills (including sanitary, industrial, and construction/demolition/debris (CDD) landfills) could only place waste over areas that met the liner and leachate collection requirements of the regulations. This included operation both vertically (i.e., increases in the height of the landfill) and horizontally (i.e., increases in the lateral extent of the landfill). In 1991, new legislation was enacted allowing local governments that owned or operated a permitted solid waste landfill an extension until January 1, 1994, to comply with the liner and leachate collection system requirements of the VSWMR. The following year, legislation gave the Department of Waste Management (a predecessor-in-interest to the Department) the authority to extend this compliance date beyond January 1, 1994, if the landfill posed no threat to public health or the environment.

In the meantime, the U.S. Environmental Protection Agency (EPA) promulgated new regulatory standards for municipal solid waste landfills on October 9, 1991. These new standards, contained in 40 CFR Part 258, were authorized by Subtitle D of the Resource Conservation and Recovery Act (RCRA) and became effective on October 9, 1993. These Subtitle D standards affected all new and existing landfills; however, the liner and leachate collection system requirements only applied to new municipal landfills or lateral expansions of municipal solid waste landfills. Under the federal criteria, existing municipal solid waste landfills could continue to operate vertically within the landfill footprint as of October 9, 1993, without meeting the new design criteria for liners and leachate collection.

On March 15, 1993, Amendment 1 of the VSWMR was enacted aligning Virginia's regulatory requirements for design of new and expanded facilities with federal standards. During the 1993 legislative session, ' 10.1408.1.N. of the Code of Virginia was enacted (also commonly referred to as House Bill 1205). This legislation allowed landfills that were permitted prior to March 15, 1993 (the effective date of Amendment 1 of the VSWMR) to continue to operate vertically within the landfill footprint as of October 9, 1993, upon certain conditions.

In March 1999 and April 1999, the General Assembly enacted Acts of Assembly cc. 584, 613, and 947 requiring the Department to undertake a comprehensive study of solid waste management in Virginia, including an analysis of and recommendations regarding solid waste disposal practices, projections on future landfill capacity needs, mechanisms to enhance waste reduction and recycling, and needed state and federal legislation to protect human health and the environment.

On April 3, 2000, an act to amend and reenact the Virginia Landfill Clean-up and Closure Fund, '10.1-1413.2 of the Code of Virginia was passed requiring the Department to prioritize disposal areas permitted before October 9, 1993 based on the greatest threat to human health and the environment. In addition, after a public notice and a period for public comment, the Department must, based on the prioritization, prepare a schedule for the closure of the HB 1205 disposal areas. No disposal area may operate after 2020 that is not equipped with a liner system approved by the Department pursuant to a permit issued after October 9, 1993.

Appendix B – Pathway Factors' Evaluation Criteria

Pathway Factors' Evaluation Criteria
MS Access Object/Visual Basic Code

Listed below is the Microsoft Access object and Visual Basic code from the model used to evaluate and score pathways.

Release Factor Variables

R1Soil=IIf([SWID] Is Null,4,IIf(['SWq.STATUS]="I" Or ['SWq.STATUS]="N",1,IIf(['SWq.STATUS]="C" Or ['SWq.STATUS]="X",3,2)))

R1Air=IIf([SWID] Is Null,4,IIf(Not ['LANDDISP'],3,IIf((['LFGtrigger] And Not ['LFGcorrect]) Or (InStr(['SW.TYPE],"s") And Not ['LINER'] And Not ['LFGcorrect]),1,IIf((['LFGtrigger] And ['LFGcorrect]),2,3))))

R1GW=IIf([SWID] Is Null,4,IIf(Not ['LANDDISP'],3,IIf((['GWtrigger] And Not ['GWcorrect]) Or (Not ['LINER'] And Not ['LEACHCOLL'] And Not ['GWcorrect]),1,IIf((['GWtrigger] And ['GWcorrect]) Or (['LINER'] And Not ['LEACHCOLL']) Or (Not ['LINER'] And ['LEACHCOLL']),2,3))))

R1SW=IIf([SWID] Is Null,4,IIf(['SWq.STATUS]="I" Or ['SWq.STATUS]="N",1,IIf(['SWq.STATUS]="C" Or ['SWq.STATUS]="X",3,2)))

Route Factor Variables

R2Soil=[R1Soil]

R2Air=IIf(['xSTRUCTURE] Is Null And ['xPROPLINE] Is Null And ['xRESIDENCE] Is Null,4,IIf(['xSTRUCTURE]=1 Or ['xRESIDENCE]=1 Or ([Qfuture] And ['xPROPLINE]<=3),1,IIf(['xSTRUCTURE]=3 And ['xRESIDENCE]=3,3,2)))

R2GW=IIf([xGWAREA] Is Null Or [xGWAREA]<1 Or [xGWAREA]>10,4,Choose([xGWAREA],2,1,2,1,1,2,2,2,2,1))

R2SW=IIf(['xSTREAM] Is Null And ['xWETLANDS] Is Null And Not ['xFLOOD],4,IIf(['xSTREAM]=1 Or ['xWETLANDS]=1 Or ['xFLOOD],1,IIf(['xSTREAM]=3,3,2)))

Receptor Factor Variables

R3Soil=[R2Soil]

R3Air=[R2Air]

R3GW=IIf(['xPROPLINE] Is Null And ['xRESIDENCE] Is Null And ['xWELLSPRING] Is Null And ['xWETLANDS] Is Null And ['xSTREAM] Is Null,4,IIf(['xWELLSPRING]=1 Or ([Qfuture] And (['xPROPLINE]<=4 Or ['xRESIDENCE]<=4)),1,IIf(['xWETLANDS]=1 Or ['xSTREAM]=1 Or ['xWELLSPRING]=3,3,2)))

R3SW=IIf(['xSTREAM] Is Null And ['xWETLANDS] Is Null And ['xFISHERY] Is Null And ['xDWSOURCE] Is Null,4,IIf(['xWETLANDS]=1 Or ['xFISHERY]=1 Or ['xDWSOURCE]=1,1,IIf(['xWETLANDS]=3 And ['xFISHERY]=3 And ['xDWSOURCE]=3,3,2)))

Where…
['SWq.STATUS] = site status (text: from SW data)
['SW.TYPE] = site type (text: from SW data)
['LANDDISP'] = land disposal (logical: interim control based on SW data)
['LINER'] = liner (logical: interim control based on SW data)
['LEACHCOLL'] = leachate collection (logical: interim control based on SW)
['GWtrigger'] = ground water trigger (logical: T = assessment monitoring)
['GWcorrect'] = ground water corrective action (logical)
['LFGtrigger'] = landfill gas trigger (logical: T = LEL exceedance)
['LFGcorrect'] = landfill gas corrective action (logical)
[x????] (=1,2,3,4…) discrete distance intervals pertinent to the feature in question (i.e., Structure, Residence, Well, Stream, Wetlands, Drinking Water Inlet, etc.)

Notes:
Scoring: 1=High; 2=Medium; 3=Low
"Null" and/or other miscellaneous tests ascertain "No Score" value of 4.
An apostrophe preceding a variable signifies a control name (not the field).
An apostrophe following a variable signifies the control is bound to a calculation.
The parameters [xFLOOD], ['xPROPLINE] and [Qfuture] were not used in the HB 1205 assessment.

Appendix C – Site Score Sheets

Final Prioritization and Closure Schedule for HB 1205 Areas
Site Score Sheet

Site Identification

Permit No. 21

Site Name Augusta Co Svc Auth

Locality Augusta | DEQ Region VRO | Lat N 38 4 43.72 | Lon W 79 3 47.27

Basis of Assessment

Site

Type of facility.	S
Facility status.	A
Land disposal facility.	YES
Combination (HB 1205/Subtitle D)	NO
Liner system.	NO
Leachate collection system.	YES
Groundwater monitoring trigger.	NO
Groundwater corrective action.	NO
Landfill gas monitoring trigger.	NO
Landfill gas corrective action.	NO

Environmental Setting:

Structure*	50 to 200 feet
Property line*	200 to 500 feet
Residence, etc*.	200 to 500 feet
Well or spring*.	500 feet to 4 miles
Flowing stream*	>200 feet
Wetlands*	> 1 mile
Drinking water*	5 to 15 miles
Aquatic target (length)	0.1 to 1 mile
Groundwater area.	Carbonate

All active HB 1205 areas are sanitary landfills (type="S", status="A") and therefore are land disposal facilities. For this prioritization, the assessments parameters refer to the HB 1205 area. The assessments of releases from other types of facilities may depend upon different criteria.

** Setbacks and distances to these features are measured from the HB 1205 area waste management unit boundary.*

Assessment Summary

PATHWAY	PATHWAY FACTORS Release	Route	Receptor	PATHWAY SCORE		
Soil Pathway	Medium	Medium	Medium	Medium		
Air Pathway	High	Medium	Medium	High		
Groundwater	Medium	High	Medium	High	**SITE SCORE:**	High
Surface Water	Medium	Low	Medium	Low	**CLOSURE DATE:**	2007

Final Prioritization and Closure Schedule for HB 1205 Areas
Site Score Sheet

Site Identification

Permit No. 429

Site Name Fluvanna Co SLF

Locality Fluvanna | DEQ Region VRO | Lat N 37 47 41.17 | Lon W 78 19 19.45

Basis of Assessment

Site

Type of facility.	S
Facility status.	A
Land disposal facility.	YES
Combination (HB 1205/Subtitle D)	NO
Liner system.	NO
Leachate collection system.	NO
Groundwater monitoring trigger.	YES
Groundwater corrective action.	NO
Landfill gas monitoring trigger.	NO
Landfill gas corrective action.	NO

Environmental Setting:

Structure*	> 200 feet
Property line*	200 to 500 feet
Residence, etc*.	> 500 feet
Well or spring*.	500 feet to 4 miles
Flowing stream*	100 to 200 feet
Wetlands*	> 1 mile
Drinking water*	5 to 15 miles
Aquatic target (length)	0.1 to 1 mile
Groundwater area.	Piedmont

All active HB 1205 areas are sanitary landfills (type="S", status="A") and therefore are land disposal facilities. For this prioritization, the assessments parameters refer to the HB 1205 area. The assessments of releases from other types of facilities may depend upon different criteria.

** Setbacks and distances to these features are measured from the HB 1205 area waste management unit boundary.*

Assessment Summary

PATHWAY	PATHWAY FACTORS Release	Route	Receptor	PATHWAY SCORE		
Soil Pathway	Medium	Medium	Medium	Medium		
Air Pathway	High	Low	Low	Medium		
Groundwater	High	Medium	Medium	High	**SITE SCORE:**	High
Surface Water	Medium	Medium	Medium	Medium	**CLOSURE DATE:**	2007

Final Prioritization and Closure Schedule for HB 1205 Areas
Site Score Sheet

Site Identification

Permit No. 92

Site Name Halifax Co SLF

Locality Halifax | DEQ Region SCRO | Lat N 36 47 23.86 | Lon W 78 51 26.14

Basis of Assessment

Site

Type of facility	S
Facility status	A
Land disposal facility	YES
Combination (HB 1205/Subtitle D)	YES
Liner system	NO
Leachate collection system	NO
Groundwater monitoring trigger	YES
Groundwater corrective action	NO
Landfill gas monitoring trigger	YES
Landfill gas corrective action	NO

Environmental Setting:

Structure*	> 200 feet
Property line*	200 to 500 feet
Residence, etc*	> 500 feet
Well or spring*	500 feet to 4 miles
Flowing stream*	100 to 200 feet
Wetlands*	< 1 mile
Drinking water*	5 to 15 miles
Aquatic target (length)	0.1 to 1 mile
Groundwater area	Piedmont

All active HB 1205 areas are sanitary landfills (type="S", status="A") and therefore are land disposal facilities. For this prioritization, the assessments parameters refer to the HB 1205 area. The assessments of releases from other types of facilities may depend upon different criteria.

** Setbacks and distances to these features are measured from the HB 1205 area waste management unit boundary.*

Assessment Summary

PATHWAY	PATHWAY FACTORS Release	Route	Receptor	PATHWAY SCORE		
Soil Pathway	Medium	Medium	Medium	Medium		
Air Pathway	High	Low	Low	Medium		
Groundwater	High	Medium	Medium	High	**SITE SCORE:**	High
Surface Water	Medium	Medium	Medium	Medium	**CLOSURE DATE:**	2007

Final Prioritization and Closure Schedule for HB 1205 Areas
Site Score Sheet

Site Identification

Permit No. 49

Site Name Martinsville LF

Locality Martinsville

DEQ Region WCRO

Lat N 36 43 5.59

Lon W 79 50 43.98

Basis of Assessment

Site

Type of facility	S
Facility status	A
Land disposal facility	YES
Combination (HB 1205/Subtitle D)	NO
Liner system	NO
Leachate collection system	NO
Groundwater monitoring trigger	YES
Groundwater corrective action	NO
Landfill gas monitoring trigger	NO
Landfill gas corrective action	NO

Environmental Setting:

Structure*	> 200 feet
Property line*	200 to 500 feet
Residence, etc*	> 500 feet
Well or spring*	500 feet to 4 miles
Flowing stream*	< 100 feet
Wetlands*	Within or adjoining
Drinking water*	< 5 miles
Aquatic target (length)	> 1 mile
Groundwater area	Piedmont

All active HB 1205 areas are sanitary landfills (type="S", status="A") and therefore are land disposal facilities. For this prioritization, the assessments parameters refer to the HB 1205 area. The assessments of releases from other types of facilities may depend upon different criteria.

** Setbacks and distances to these features are measured from the HB 1205 area waste management unit boundary.*

Assessment Summary

PATHWAY	PATHWAY FACTORS Release	Route	Receptor	PATHWAY SCORE		
Soil Pathway	Medium	Medium	Medium	Medium		
Air Pathway	High	Low	Low	Medium		
Groundwater	High	Medium	Low	Medium	**SITE SCORE:**	High
Surface Water	Medium	High	High	High	**CLOSURE DATE:**	2007

Final Prioritization and Closure Schedule for HB 1205 Areas
Site Score Sheet

Site Identification

Permit No. 14

Site Name Mecklenburg Co LF

Locality Mecklenburg

DEQ Region SCRO

Lat N 36 41 5.50
Lon W 78 19 0.70

Basis of Assessment

Site

Type of facility.	S
Facility status.	A
Land disposal facility.	YES
Combination (HB 1205/Subtitle D)	NO
Liner system.	NO
Leachate collection system.	NO
Groundwater monitoring trigger.	YES
Groundwater corrective action.	NO
Landfill gas monitoring trigger.	NO
Landfill gas corrective action.	NO

Environmental Setting:

Structure*	> 200 feet
Property line*	> 500 feet
Residence, etc*.	> 500 feet
Well or spring*.	500 feet to 4 miles
Flowing stream*	100 to 200 feet
Wetlands*	< 1 mile
Drinking water*	5 to 15 miles
Aquatic target (length)	0.1 to 1 mile
Groundwater area.	Piedmont

All active HB 1205 areas are sanitary landfills (type="S", status="A") and therefore are land disposal facilities. For this prioritization, the assessments parameters refer to the HB 1205 area. The assessments of releases from other types of facilities may depend upon different criteria.

** Setbacks and distances to these features are measured from the HB 1205 area waste management unit boundary.*

Assessment Summary

PATHWAY	PATHWAY FACTORS Release	Route	Receptor	PATHWAY SCORE		
Soil Pathway	Medium	Medium	Medium	Medium		
Air Pathway	High	Low	Low	Medium		
Groundwater	High	Medium	Medium	High	**SITE SCORE:**	High
Surface Water	Medium	Medium	Medium	Medium	**CLOSURE DATE:**	2007

Final Prioritization and Closure Schedule for HB 1205 Areas
Site Score Sheet

Site Identification

Permit No. 228

Site Name Petersburg City LF

Locality Petersburg

DEQ Region PRO

Lat N 37 14 33.47

Lon W 77 22 31.15

Basis of Assessment

Site

Type of facility.	S
Facility status.	A
Land disposal facility.	YES
Combination (HB 1205/Subtitle D)	YES
Liner system.	YES
Leachate collection system.	YES
Groundwater monitoring trigger.	YES
Groundwater corrective action.	NO
Landfill gas monitoring trigger.	YES
Landfill gas corrective action.	YES

Environmental Setting:

Structure*	50 to 200 feet
Property line*	200 to 500 feet
Residence, etc*.	> 500 feet
Well or spring*.	500 feet to 4 miles
Flowing stream*	100 to 200 feet
Wetlands*	< 1 mile
Drinking water*	5 to 15 miles
Aquatic target (length)	< 0.1 mile
Groundwater area.	Coastal Plain

All active HB 1205 areas are sanitary landfills (type="S", status="A") and therefore are land disposal facilities. For this prioritization, the assessments parameters refer to the HB 1205 area. The assessments of releases from other types of facilities may depend upon different criteria.

** Setbacks and distances to these features are measured from the HB 1205 area waste management unit boundary.*

Assessment Summary

PATHWAY	PATHWAY FACTORS Release	Route	Receptor	PATHWAY SCORE		
Soil Pathway	Medium	Medium	Medium	Medium		
Air Pathway	Medium	Medium	Medium	Medium		
Groundwater	High	High	Medium	High	**SITE SCORE:**	High
Surface Water	Medium	Medium	Medium	Medium	**CLOSURE DATE:**	2007

Final Prioritization and Closure Schedule for HB 1205 Areas
Site Score Sheet

Site Identification

Permit No. 31

Site Name South Boston SLF

Locality South Boston

DEQ Region SCRO

Lat N 36 43 5.02

Lon W 78 53 48.05

Basis of Assessment

Site

Type of facility.	S
Facility status.	A
Land disposal facility.	YES
Combination (HB 1205/Subtitle D)	NO
Liner system.	NO
Leachate collection system.	NO
Groundwater monitoring trigger.	YES
Groundwater corrective action.	NO
Landfill gas monitoring trigger.	NO
Landfill gas corrective action.	NO

Environmental Setting:

Structure*	> 200 feet
Property line*	200 to 500 feet
Residence, etc*.	200 to 500 feet
Well or spring*.	500 feet to 4 miles
Flowing stream*	< 100 feet
Wetlands*	< 1 mile
Drinking water*	5 to 15 miles
Aquatic target (length)	> 1 mile
Groundwater area.	Piedmont

All active HB 1205 areas are sanitary landfills (type="S", status="A") and therefore are land disposal facilities. For this prioritization, the assessments parameters refer to the HB 1205 area. The assessments of releases from other types of facilities may depend upon different criteria.

** Setbacks and distances to these features are measured from the HB 1205 area waste management unit boundary.*

Assessment Summary

PATHWAY	PATHWAY FACTORS Release	Route	Receptor	PATHWAY SCORE		
Soil Pathway	Medium	Medium	Medium	Medium		
Air Pathway	High	Medium	Medium	High		
Groundwater	High	Medium	Low	Medium	**SITE SCORE:**	High
Surface Water	Medium	High	High	High	**CLOSURE DATE:**	2007

Final Prioritization and Closure Schedule for HB 1205 Areas
Site Score Sheet

Site Identification

Permit No. 204

Site Name Waynesboro City LF

Locality Waynesboro

DEQ Region VRO

Lat N 38 3 52.81
Lon W 78 52 0.95

Basis of Assessment

Site

Type of facility	S
Facility status	A
Land disposal facility	YES
Combination (HB 1205/Subtitle D)	NO
Liner system	NO
Leachate collection system	NO
Groundwater monitoring trigger	YES
Groundwater corrective action	NO
Landfill gas monitoring trigger	YES
Landfill gas corrective action	NO

Environmental Setting:

Structure*	< 50 feet
Property line*	< 50 feet
Residence, etc*	< 200 feet
Well or spring*	< 500 feet
Flowing stream*	< 100 feet
Wetlands*	< 1 mile
Drinking water*	5 to 15 miles
Aquatic target (length)	> 1 mile
Groundwater area	Carbonate

All active HB 1205 areas are sanitary landfills (type="S", status="A") and therefore are land disposal facilities. For this prioritization, the assessments parameters refer to the HB 1205 area. The assessments of releases from other types of facilities may depend upon different criteria.

** Setbacks and distances to these features are measured from the HB 1205 area waste management unit boundary.*

Assessment Summary

PATHWAY	PATHWAY FACTORS Release	Route	Receptor	PATHWAY SCORE		
Soil Pathway	Medium	Medium	Medium	Medium		
Air Pathway	High	High	High	High		
Groundwater	High	High	High	High	**SITE SCORE:**	High
Surface Water	Medium	High	High	High	**CLOSURE DATE:**	2007

Final Prioritization and Closure Schedule for HB 1205 Areas
Site Score Sheet

Site Identification

Permit No. 91

Site Name Accomack Co LF - Bobtown South

Locality Accomack | DEQ Region TRO | Lat N 37 38 50.28 | Lon W 75 46 50.23

Basis of Assessment

Site

Type of facility.	S
Facility status.	A
Land disposal facility.	YES
Combination (HB 1205/Subtitle D)	NO
Liner system.	NO
Leachate collection system.	NO
Groundwater monitoring trigger.	YES
Groundwater corrective action.	NO
Landfill gas monitoring trigger.	YES
Landfill gas corrective action.	YES

Environmental Setting:

Structure*	> 200 feet
Property line*	200 to 500 feet
Residence, etc*.	200 to 500 feet
Well or spring*.	500 feet to 4 miles
Flowing stream*	>200 feet
Wetlands*	< 1 mile
Drinking water*	> 15 miles
Aquatic target (length)	0.1 to 1 mile
Groundwater area.	Coastal Plain

All active HB 1205 areas are sanitary landfills (type="S", status="A") and therefore are land disposal facilities. For this prioritization, the assessments parameters refer to the HB 1205 area. The assessments of releases from other types of facilities may depend upon different criteria.

** Setbacks and distances to these features are measured from the HB 1205 area waste management unit boundary.*

Assessment Summary

PATHWAY	PATHWAY FACTORS Release	Route	Receptor	PATHWAY SCORE		
Soil Pathway	Medium	Medium	Medium	Medium		
Air Pathway	Medium	Medium	Medium	Medium		
Groundwater	High	High	Medium	High	**SITE SCORE:**	Medium
Surface Water	Medium	Low	Medium	Low	**CLOSURE DATE:**	2012

Final Prioritization and Closure Schedule for HB 1205 Areas
Site Score Sheet

Site Identification

Permit No. 580

Site Name Big Bethel Landfill

Locality Hampton

DEQ Region TRO

Lat N 37 4 49.04

Lon W 76 26 3.84

Basis of Assessment

Site

Type of facility.	S
Facility status.	A
Land disposal facility.	YES
Combination (HB 1205/Subtitle D)	YES
Liner system.	YES
Leachate collection system.	NO
Groundwater monitoring trigger.	NO
Groundwater corrective action.	NO
Landfill gas monitoring trigger.	NO
Landfill gas corrective action.	YES

Environmental Setting:

Structure*	> 200 feet
Property line*	200 to 500 feet
Residence, etc*.	200 to 500 feet
Well or spring*.	500 feet to 4 miles
Flowing stream*	>200 feet
Wetlands*	> 1 mile
Drinking water*	> 15 miles
Aquatic target (length)	> 1 mile
Groundwater area.	Coastal Plain

All active HB 1205 areas are sanitary landfills (type="S", status="A") and therefore are land disposal facilities. For this prioritization, the assessments parameters refer to the HB 1205 area. The assessments of releases from other types of facilities may depend upon different criteria.

** Setbacks and distances to these features are measured from the HB 1205 area waste management unit boundary.*

Assessment Summary

PATHWAY	PATHWAY FACTORS Release	Route	Receptor	PATHWAY SCORE		
Soil Pathway	Medium	Medium	Medium	Medium		
Air Pathway	Low	Medium	Medium	Low		
Groundwater	Medium	High	Medium	High	**SITE SCORE:**	Medium
Surface Water	Medium	Low	High	Medium	**CLOSURE DATE:**	2012

Final Prioritization and Closure Schedule for HB 1205 Areas
Site Score Sheet

Site Identification

Permit No. 182

Site Name Caroline Co LF

Locality Caroline | DEQ Region NRO | Lat N 38 3 22.90 | Lon W 77 18 33.30

Basis of Assessment

Site

Type of facility.	S
Facility status.	A
Land disposal facility.	YES
Combination (HB 1205/Subtitle D)	NO
Liner system.	NO
Leachate collection system.	NO
Groundwater monitoring trigger.	YES
Groundwater corrective action.	NO
Landfill gas monitoring trigger.	YES
Landfill gas corrective action.	YES

Environmental Setting:

Structure*	> 200 feet
Property line*	200 to 500 feet
Residence, etc*.	> 500 feet
Well or spring*.	500 feet to 4 miles
Flowing stream*	>200 feet
Wetlands*	Within or adjoining
Drinking water*	5 to 15 miles
Aquatic target (length)	0.1 to 1 mile
Groundwater area.	West Toe

All active HB 1205 areas are sanitary landfills (type="S", status="A") and therefore are land disposal facilities. For this prioritization, the assessments parameters refer to the HB 1205 area. The assessments of releases from other types of facilities may depend upon different criteria.

** Setbacks and distances to these features are measured from the HB 1205 area waste management unit boundary.*

Assessment Summary

PATHWAY	PATHWAY FACTORS Release	Route	Receptor	PATHWAY SCORE		
Soil Pathway	Medium	Medium	Medium	Medium		
Air Pathway	Medium	Low	Low	Low		
Groundwater	High	High	Low	Medium	**SITE SCORE:**	Medium
Surface Water	Medium	High	High	High	**CLOSURE DATE:**	2012

Final Prioritization and Closure Schedule for HB 1205 Areas
Site Score Sheet

Site Identification

Permit No. 149

Site Name Fauquier Co LF

Locality Fauquier | DEQ Region NRO | Lat N 38 40 20.28 | Lon W 77 46 39.72

Basis of Assessment

Site

Type of facility.	S
Facility status.	A
Land disposal facility.	YES
Combination (HB 1205/Subtitle D)	NO
Liner system.	NO
Leachate collection system.	NO
Groundwater monitoring trigger.	YES
Groundwater corrective action.	NO
Landfill gas monitoring trigger.	YES
Landfill gas corrective action.	YES

Environmental Setting:

Structure*	> 200 feet
Property line*	200 to 500 feet
Residence, etc*.	> 500 feet
Well or spring*.	500 feet to 4 miles
Flowing stream*	< 100 feet
Wetlands*	> 1 mile
Drinking water*	5 to 15 miles
Aquatic target (length)	0.1 to 1 mile
Groundwater area.	Piedmont

All active HB 1205 areas are sanitary landfills (type="S", status="A") and therefore are land disposal facilities. For this prioritization, the assessments parameters refer to the HB 1205 area. The assessments of releases from other types of facilities may depend upon different criteria.

** Setbacks and distances to these features are measured from the HB 1205 area waste management unit boundary.*

Assessment Summary

PATHWAY	PATHWAY FACTORS Release	Route	Receptor	PATHWAY SCORE		
Soil Pathway	Medium	Medium	Medium	Medium		
Air Pathway	Medium	Low	Low	Low		
Groundwater	High	Medium	Low	Medium	**SITE SCORE:**	Medium
Surface Water	Medium	High	Medium	High	**CLOSURE DATE:**	2012

Final Prioritization and Closure Schedule for HB 1205 Areas
Site Score Sheet

Site Identification

Permit No. 405

Site Name Greensville Co LF

Locality Greensville

DEQ Region PRO

Lat N 36 44 37.93
Lon W 77 36 7.27

Basis of Assessment

Site

Type of facility.	S
Facility status.	A
Land disposal facility.	YES
Combination (HB 1205/Subtitle D)	YES
Liner system.	NO
Leachate collection system.	NO
Groundwater monitoring trigger.	YES
Groundwater corrective action.	NO
Landfill gas monitoring trigger.	NO
Landfill gas corrective action.	NO

Environmental Setting:

Structure*	> 200 feet
Property line*	200 to 500 feet
Residence, etc*.	> 500 feet
Well or spring*.	500 feet to 4 miles
Flowing stream*	>200 feet
Wetlands*	< 1 mile
Drinking water*	5 to 15 miles
Aquatic target (length)	0.1 to 1 mile
Groundwater area.	Fall Zone

All active HB 1205 areas are sanitary landfills (type="S", status="A") and therefore are land disposal facilities. For this prioritization, the assessments parameters refer to the HB 1205 area. The assessments of releases from other types of facilities may depend upon different criteria.

** Setbacks and distances to these features are measured from the HB 1205 area waste management unit boundary.*

Assessment Summary

PATHWAY	PATHWAY FACTORS Release	Route	Receptor	PATHWAY SCORE		
Soil Pathway	Medium	Medium	Medium	Medium		
Air Pathway	High	Low	Low	Medium		
Groundwater	High	Medium	Medium	High	**SITE SCORE:**	Medium
Surface Water	Medium	Low	Medium	Low	**CLOSURE DATE:**	2012

Final Prioritization and Closure Schedule for HB 1205 Areas
Site Score Sheet

Site Identification

Permit No. 29

Site Name Independent Hill LF

Locality Prince William | DEQ Region NRO | Lat N 38 38 17.52 | Lon W 77 25 13.30

Basis of Assessment

Site

Type of facility.	S
Facility status.	A
Land disposal facility.	YES
Combination (HB 1205/Subtitle D)	YES
Liner system.	NO
Leachate collection system.	YES
Groundwater monitoring trigger.	YES
Groundwater corrective action.	NO
Landfill gas monitoring trigger.	YES
Landfill gas corrective action.	YES

Environmental Setting:

Structure*	> 200 feet
Property line*	200 to 500 feet
Residence, etc*.	> 500 feet
Well or spring*.	500 feet to 4 miles
Flowing stream*	100 to 200 feet
Wetlands*	< 1 mile
Drinking water*	5 to 15 miles
Aquatic target (length)	0.1 to 1 mile
Groundwater area.	Piedmont

All active HB 1205 areas are sanitary landfills (type="S", status="A") and therefore are land disposal facilities. For this prioritization, the assessments parameters refer to the HB 1205 area. The assessments of releases from other types of facilities may depend upon different criteria.

** Setbacks and distances to these features are measured from the HB 1205 area waste management unit boundary.*

Assessment Summary

PATHWAY	PATHWAY FACTORS Release	Route	Receptor	PATHWAY SCORE		
Soil Pathway	Medium	Medium	Medium	Medium		
Air Pathway	Medium	Low	Low	Low		
Groundwater	High	Medium	Medium	High	**SITE SCORE:**	Medium
Surface Water	Medium	Medium	Medium	Medium	**CLOSURE DATE:**	2012

Final Prioritization and Closure Schedule for HB 1205 Areas
Site Score Sheet

Site Identification

Permit No. 1

Site Name Loudoun Co SLF

Locality Loudoun | DEQ Region NRO | Lat N 39 2 36.42 | Lon W 77 35 20.80

Basis of Assessment

Site

Type of facility.	S
Facility status.	A
Land disposal facility.	YES
Combination (HB 1205/Subtitle D)	NO
Liner system.	YES
Leachate collection system.	YES
Groundwater monitoring trigger.	YES
Groundwater corrective action.	NO
Landfill gas monitoring trigger.	YES
Landfill gas corrective action.	YES

Environmental Setting:

Structure*	> 200 feet
Property line*	> 500 feet
Residence, etc*.	> 500 feet
Well or spring*.	500 feet to 4 miles
Flowing stream*	100 to 200 feet
Wetlands*	< 1 mile
Drinking water*	5 to 15 miles
Aquatic target (length)	0.1 to 1 mile
Groundwater area.	Triassic Basin

All active HB 1205 areas are sanitary landfills (type="S", status="A") and therefore are land disposal facilities. For this prioritization, the assessments parameters refer to the HB 1205 area. The assessments of releases from other types of facilities may depend upon different criteria.

** Setbacks and distances to these features are measured from the HB 1205 area waste management unit boundary.*

Assessment Summary

PATHWAY	PATHWAY FACTORS Release	Route	Receptor	PATHWAY SCORE		
Soil Pathway	Medium	Medium	Medium	Medium		
Air Pathway	Medium	Low	Low	Low		
Groundwater	High	Medium	Medium	High	**SITE SCORE:**	Medium
Surface Water	Medium	Medium	Medium	Medium	**CLOSURE DATE:**	2012

Final Prioritization and Closure Schedule for HB 1205 Areas
Site Score Sheet

Site Identification

Permit No. 194

Site Name Louisa Co SLF

Locality Louisa

DEQ Region NRO

Lat N 37 59 13.09

Lon W 77 53 6.00

Basis of Assessment

Site

Type of facility.	S
Facility status.	A
Land disposal facility.	YES
Combination (HB 1205/Subtitle D)	NO
Liner system.	NO
Leachate collection system.	NO
Groundwater monitoring trigger.	YES
Groundwater corrective action.	NO
Landfill gas monitoring trigger.	NO
Landfill gas corrective action.	NO

Environmental Setting:

Structure*	> 200 feet
Property line*	200 to 500 feet
Residence, etc*.	> 500 feet
Well or spring*.	500 feet to 4 miles
Flowing stream*	>200 feet
Wetlands*	> 1 mile
Drinking water*	5 to 15 miles
Aquatic target (length)	0.1 to 1 mile
Groundwater area.	Piedmont

All active HB 1205 areas are sanitary landfills (type="S", status="A") and therefore are land disposal facilities. For this prioritization, the assessments parameters refer to the HB 1205 area. The assessments of releases from other types of facilities may depend upon different criteria.

** Setbacks and distances to these features are measured from the HB 1205 area waste management unit boundary.*

Assessment Summary

PATHWAY	PATHWAY FACTORS Release	Route	Receptor	PATHWAY SCORE		
Soil Pathway	Medium	Medium	Medium	Medium		
Air Pathway	High	Low	Low	Medium		
Groundwater	High	Medium	Medium	High	**SITE SCORE:**	Medium
Surface Water	Medium	Low	Medium	Low	**CLOSURE DATE:**	2012

Final Prioritization and Closure Schedule for HB 1205 Areas
Site Score Sheet

Site Identification

Permit No. 227

Site Name Lunenburg Co SLF

Locality Lunenburg | DEQ Region SCRO | Lat N 36 55 24.78 | Lon W 78 14 49.38

Basis of Assessment

Site

Type of facility.	S
Facility status.	A
Land disposal facility.	YES
Combination (HB 1205/Subtitle D)	NO
Liner system.	NO
Leachate collection system.	NO
Groundwater monitoring trigger.	YES
Groundwater corrective action.	NO
Landfill gas monitoring trigger.	NO
Landfill gas corrective action.	NO

Environmental Setting:

Structure*	> 200 feet
Property line*	> 500 feet
Residence, etc*.	> 500 feet
Well or spring*.	500 feet to 4 miles
Flowing stream*	>200 feet
Wetlands*	> 1 mile
Drinking water*	5 to 15 miles
Aquatic target (length)	0.1 to 1 mile
Groundwater area.	Piedmont

All active HB 1205 areas are sanitary landfills (type="S", status="A") and therefore are land disposal facilities. For this prioritization, the assessments parameters refer to the HB 1205 area. The assessments of releases from other types of facilities may depend upon different criteria.

** Setbacks and distances to these features are measured from the HB 1205 area waste management unit boundary.*

Assessment Summary

PATHWAY	PATHWAY FACTORS Release	Route	Receptor	PATHWAY SCORE		
Soil Pathway	Medium	Medium	Medium	Medium		
Air Pathway	High	Low	Low	Medium		
Groundwater	High	Medium	Medium	High	**SITE SCORE:**	Medium
Surface Water	Medium	Low	Medium	Low	**CLOSURE DATE:**	2012

Final Prioritization and Closure Schedule for HB 1205 Areas
Site Score Sheet

Site Identification

Permit No. 397

Site Name Mid-county LF - Montgomery Co

Locality Montgomery

DEQ Region WCRO

Lat N 37 10 12.43

Lon W 80 24 28.51

Basis of Assessment

Site

Type of facility.	S
Facility status.	A
Land disposal facility.	YES
Combination (HB 1205/Subtitle D)	NO
Liner system.	NO
Leachate collection system.	YES
Groundwater monitoring trigger.	NO
Groundwater corrective action.	NO
Landfill gas monitoring trigger.	YES
Landfill gas corrective action.	NO

Environmental Setting:

Structure*	> 200 feet
Property line*	200 to 500 feet
Residence, etc*.	> 500 feet
Well or spring*.	500 feet to 4 miles
Flowing stream*	>200 feet
Wetlands*	> 1 mile
Drinking water*	5 to 15 miles
Aquatic target (length)	0.1 to 1 mile
Groundwater area.	Carbonate

All active HB 1205 areas are sanitary landfills (type="S", status="A") and therefore are land disposal facilities. For this prioritization, the assessments parameters refer to the HB 1205 area. The assessments of releases from other types of facilities may depend upon different criteria.

** Setbacks and distances to these features are measured from the HB 1205 area waste management unit boundary.*

Assessment Summary

PATHWAY	PATHWAY FACTORS Release	Route	Receptor	PATHWAY SCORE		
Soil Pathway	Medium	Medium	Medium	Medium		
Air Pathway	High	Low	Low	Medium		
Groundwater	Medium	High	Medium	High	**SITE SCORE:**	Medium
Surface Water	Medium	Low	Medium	Low	**CLOSURE DATE:**	2012

Final Prioritization and Closure Schedule for HB 1205 Areas
Site Score Sheet

Site Identification

Permit No. 507

Site Name Northampton Co LF - Oyster Site

Locality Northampton | DEQ Region TRO | Lat N 37 17 56.26 | Lon W 75 55 40.51

Basis of Assessment

Site

Type of facility.	S
Facility status.	A
Land disposal facility.	YES
Combination (HB 1205/Subtitle D)	NO
Liner system.	YES
Leachate collection system.	YES
Groundwater monitoring trigger.	YES
Groundwater corrective action.	NO
Landfill gas monitoring trigger.	NO
Landfill gas corrective action.	NO

Environmental Setting:

Structure*	> 200 feet
Property line*	200 to 500 feet
Residence, etc*.	> 500 feet
Well or spring*.	500 feet to 4 miles
Flowing stream*	100 to 200 feet
Wetlands*	Within or adjoining
Drinking water*	5 to 15 miles
Aquatic target (length)	0.1 to 1 mile
Groundwater area.	Coastal Plain

All active HB 1205 areas are sanitary landfills (type="S", status="A") and therefore are land disposal facilities. For this prioritization, the assessments parameters refer to the HB 1205 area. The assessments of releases from other types of facilities may depend upon different criteria.

** Setbacks and distances to these features are measured from the HB 1205 area waste management unit boundary.*

Assessment Summary

PATHWAY	PATHWAY FACTORS Release	Route	Receptor	PATHWAY SCORE		
Soil Pathway	Medium	Medium	Medium	Medium		
Air Pathway	Low	Low	Low	Low		
Groundwater	High	High	Low	Medium	**SITE SCORE:**	Medium
Surface Water	Medium	High	High	High	**CLOSURE DATE:**	2012

Final Prioritization and Closure Schedule for HB 1205 Areas
Site Score Sheet

Site Identification

Permit No. 90

Site Name Orange Co LF

Locality Orange

DEQ Region NRO

Lat N 38 14 37.28

Lon W 78 2 5.71

Basis of Assessment

Site

Type of facility.	S
Facility status.	A
Land disposal facility.	YES
Combination (HB 1205/Subtitle D)	NO
Liner system.	NO
Leachate collection system.	NO
Groundwater monitoring trigger.	YES
Groundwater corrective action.	NO
Landfill gas monitoring trigger.	YES
Landfill gas corrective action.	NO

Environmental Setting:

Structure*	> 200 feet
Property line*	200 to 500 feet
Residence, etc*.	> 500 feet
Well or spring*.	500 feet to 4 miles
Flowing stream*	>200 feet
Wetlands*	< 1 mile
Drinking water*	5 to 15 miles
Aquatic target (length)	0.1 to 1 mile
Groundwater area.	Piedmont

All active HB 1205 areas are sanitary landfills (type="S", status="A") and therefore are land disposal facilities. For this prioritization, the assessments parameters refer to the HB 1205 area. The assessments of releases from other types of facilities may depend upon different criteria.

** Setbacks and distances to these features are measured from the HB 1205 area waste management unit boundary.*

Assessment Summary

PATHWAY	PATHWAY FACTORS Release	Route	Receptor	PATHWAY SCORE		
Soil Pathway	Medium	Medium	Medium	Medium		
Air Pathway	High	Low	Low	Medium		
Groundwater	High	Medium	Medium	High	**SITE SCORE:**	Medium
Surface Water	Medium	Low	Medium	Low	**CLOSURE DATE:**	2012

Final Prioritization and Closure Schedule for HB 1205 Areas
Site Score Sheet

Site Identification

Permit No. 75

Site Name Rockbridge Co SLF - Buena Vista

Locality Rockbridge

DEQ Region VRO

Lat N 37 45 56.00
Lon W 79 21 41.00

Basis of Assessment

Site

Type of facility.	S
Facility status.	A
Land disposal facility.	YES
Combination (HB 1205/Subtitle D)	NO
Liner system.	NO
Leachate collection system.	NO
Groundwater monitoring trigger.	YES
Groundwater corrective action.	NO
Landfill gas monitoring trigger.	NO
Landfill gas corrective action.	NO

Environmental Setting:

Structure*	> 200 feet
Property line*	200 to 500 feet
Residence, etc*.	> 500 feet
Well or spring*.	500 feet to 4 miles
Flowing stream*	>200 feet
Wetlands*	> 1 mile
Drinking water*	5 to 15 miles
Aquatic target (length)	0.1 to 1 mile
Groundwater area.	Carbonate

All active HB 1205 areas are sanitary landfills (type="S", status="A") and therefore are land disposal facilities. For this prioritization, the assessments parameters refer to the HB 1205 area. The assessments of releases from other types of facilities may depend upon different criteria.

** Setbacks and distances to these features are measured from the HB 1205 area waste management unit boundary.*

Assessment Summary

PATHWAY	PATHWAY FACTORS Release	Route	Receptor	PATHWAY SCORE		
Soil Pathway	Medium	Medium	Medium	Medium		
Air Pathway	High	Low	Low	Medium		
Groundwater	High	High	Medium	High	**SITE SCORE:**	Medium
Surface Water	Medium	Low	Medium	Low	**CLOSURE DATE:**	2012

Final Prioritization and Closure Schedule for HB 1205 Areas
Site Score Sheet

Site Identification

Permit No. 23

Site Name Scott Co LF

Locality Scott

DEQ Region SWRO

Lat N 36 44 21.48
Lon W 82 31 24.96

Basis of Assessment

Site

Type of facility.	S
Facility status.	A
Land disposal facility.	YES
Combination (HB 1205/Subtitle D)	NO
Liner system.	YES
Leachate collection system.	NO
Groundwater monitoring trigger.	YES
Groundwater corrective action.	NO
Landfill gas monitoring trigger.	YES
Landfill gas corrective action.	NO

Environmental Setting:

Structure*	> 200 feet
Property line*	200 to 500 feet
Residence, etc*.	> 500 feet
Well or spring*.	500 feet to 4 miles
Flowing stream*	>200 feet
Wetlands*	< 1 mile
Drinking water*	5 to 15 miles
Aquatic target (length)	0.1 to 1 mile
Groundwater area.	Carbonate

All active HB 1205 areas are sanitary landfills (type="S", status="A") and therefore are land disposal facilities. For this prioritization, the assessments parameters refer to the HB 1205 area. The assessments of releases from other types of facilities may depend upon different criteria.

** Setbacks and distances to these features are measured from the HB 1205 area waste management unit boundary.*

Assessment Summary

PATHWAY	PATHWAY FACTORS Release	Route	Receptor	PATHWAY SCORE		
Soil Pathway	Medium	Medium	Medium	Medium		
Air Pathway	High	Low	Low	Medium		
Groundwater	High	High	Medium	High	**SITE SCORE:**	Medium
Surface Water	Medium	Low	Medium	Low	**CLOSURE DATE:**	2012

Final Prioritization and Closure Schedule for HB 1205 Areas
Site Score Sheet

Site Identification

Permit No. 469

Site Name Shenandoah Co SLF

Locality Shenandoah | DEQ Region VRO | Lat N 38 50 26.09 | Lon W 78 32 37.21

Basis of Assessment

Site

Type of facility.	S
Facility status.	A
Land disposal facility.	YES
Combination (HB 1205/Subtitle D)	NO
Liner system.	NO
Leachate collection system.	YES
Groundwater monitoring trigger.	YES
Groundwater corrective action.	NO
Landfill gas monitoring trigger.	YES
Landfill gas corrective action.	YES

Environmental Setting:

Structure*	> 200 feet
Property line*	200 to 500 feet
Residence, etc*.	> 500 feet
Well or spring*.	500 feet to 4 miles
Flowing stream*	>200 feet
Wetlands*	> 1 mile
Drinking water*	< 5 miles
Aquatic target (length)	0.1 to 1 mile
Groundwater area.	Carbonate

All active HB 1205 areas are sanitary landfills (type="S", status="A") and therefore are land disposal facilities. For this prioritization, the assessments parameters refer to the HB 1205 area. The assessments of releases from other types of facilities may depend upon different criteria.

** Setbacks and distances to these features are measured from the HB 1205 area waste management unit boundary.*

Assessment Summary

PATHWAY	PATHWAY FACTORS Release	Route	Receptor	PATHWAY SCORE		
Soil Pathway	Medium	Medium	Medium	Medium		
Air Pathway	Medium	Low	Low	Low		
Groundwater	High	High	Medium	High	**SITE SCORE:**	Medium
Surface Water	Medium	Low	High	Medium	**CLOSURE DATE:**	2012

Final Prioritization and Closure Schedule for HB 1205 Areas
Site Score Sheet

Site Identification

Permit No. 587

Site Name Shoosmith Sanitary Landfill

Locality Chesterfield | DEQ Region PRO | Lat N 37 21 25.34 | Lon W 77 30 18.25

Basis of Assessment

Site

Type of facility	S
Facility status	A
Land disposal facility	YES
Combination (HB 1205/Subtitle D)	YES
Liner system	YES
Leachate collection system	YES
Groundwater monitoring trigger	YES
Groundwater corrective action	NO
Landfill gas monitoring trigger	NO
Landfill gas corrective action	YES

Environmental Setting:

Structure*	> 200 feet
Property line*	> 500 feet
Residence, etc*	> 500 feet
Well or spring*	500 feet to 4 miles
Flowing stream*	< 100 feet
Wetlands*	< 1 mile
Drinking water*	5 to 15 miles
Aquatic target (length)	< 0.1 mile
Groundwater area	Fall Zone

All active HB 1205 areas are sanitary landfills (type="S", status="A") and therefore are land disposal facilities. For this prioritization, the assessments parameters refer to the HB 1205 area. The assessments of releases from other types of facilities may depend upon different criteria.

** Setbacks and distances to these features are measured from the HB 1205 area waste management unit boundary.*

Assessment Summary

PATHWAY	PATHWAY FACTORS Release	Route	Receptor	PATHWAY SCORE
Soil Pathway	Medium	Medium	Medium	Medium
Air Pathway	Low	Low	Low	Low
Groundwater	High	Medium	Low	Medium
Surface Water	Medium	High	Medium	High

SITE SCORE: Medium

CLOSURE DATE: 2012

Final Prioritization and Closure Schedule for HB 1205 Areas
Site Score Sheet

Site Identification

Permit No. 417

Site Name SPSA Regional LF

Locality Suffolk

DEQ Region TRO

Lat N 36 45 19.12

Lon W 76 31 36.26

Basis of Assessment

Site

Type of facility.	S
Facility status.	A
Land disposal facility.	YES
Combination (HB 1205/Subtitle D)	YES
Liner system.	YES
Leachate collection system.	YES
Groundwater monitoring trigger.	YES
Groundwater corrective action.	NO
Landfill gas monitoring trigger.	NO
Landfill gas corrective action.	YES

Environmental Setting:

Structure*	> 200 feet
Property line*	200 to 500 feet
Residence, etc*.	> 500 feet
Well or spring*.	500 feet to 4 miles
Flowing stream*	>200 feet
Wetlands*	Within or adjoining
Drinking water*	5 to 15 miles
Aquatic target (length)	0.1 to 1 mile
Groundwater area.	Coastal Plain

All active HB 1205 areas are sanitary landfills (type="S", status="A") and therefore are land disposal facilities. For this prioritization, the assessments parameters refer to the HB 1205 area. The assessments of releases from other types of facilities may depend upon different criteria.

** Setbacks and distances to these features are measured from the HB 1205 area waste management unit boundary.*

Assessment Summary

PATHWAY	PATHWAY FACTORS Release	Route	Receptor	PATHWAY SCORE		
Soil Pathway	Medium	Medium	Medium	Medium		
Air Pathway	Low	Low	Low	Low		
Groundwater	High	High	Low	Medium	**SITE SCORE:**	Medium
Surface Water	Medium	High	High	High	**CLOSURE DATE:**	2012

Final Prioritization and Closure Schedule for HB 1205 Areas
Site Score Sheet

Site Identification

Permit No. 74

Site Name Stafford Co LF

Locality Stafford | DEQ Region NRO | Lat N 38 23 2.18 | Lon W 77 24 59.29

Basis of Assessment

Site

Type of facility.	S
Facility status.	A
Land disposal facility.	YES
Combination (HB 1205/Subtitle D)	NO
Liner system.	NO
Leachate collection system.	NO
Groundwater monitoring trigger.	YES
Groundwater corrective action.	NO
Landfill gas monitoring trigger.	YES
Landfill gas corrective action.	YES

Environmental Setting:

Structure*	> 200 feet
Property line*	200 to 500 feet
Residence, etc*.	> 500 feet
Well or spring*.	500 feet to 4 miles
Flowing stream*	< 100 feet
Wetlands*	Within or adjoining
Drinking water*	5 to 15 miles
Aquatic target (length)	0.1 to 1 mile
Groundwater area.	Fall Zone

All active HB 1205 areas are sanitary landfills (type="S", status="A") and therefore are land disposal facilities. For this prioritization, the assessments parameters refer to the HB 1205 area. The assessments of releases from other types of facilities may depend upon different criteria.

** Setbacks and distances to these features are measured from the HB 1205 area waste management unit boundary.*

Assessment Summary

PATHWAY	PATHWAY FACTORS Release	Route	Receptor	PATHWAY SCORE		
Soil Pathway	Medium	Medium	Medium	Medium		
Air Pathway	Medium	Low	Low	Low		
Groundwater	High	Medium	Low	Medium	**SITE SCORE:**	Medium
Surface Water	Medium	High	High	High	**CLOSURE DATE:**	2012

Final Prioritization and Closure Schedule for HB 1205 Areas
Site Score Sheet

Site Identification

Permit No. 461

Site Name Accomack Co LF #2

Locality Accomack

DEQ Region TRO

Lat N 37 54 23.47

Lon W 75 32 0.10

Basis of Assessment

Site

Type of facility.	S
Facility status.	A
Land disposal facility.	YES
Combination (HB 1205/Subtitle D)	YES
Liner system.	YES
Leachate collection system.	YES
Groundwater monitoring trigger.	YES
Groundwater corrective action.	NO
Landfill gas monitoring trigger.	NO
Landfill gas corrective action.	NO

Environmental Setting:

Structure*	> 200 feet
Property line*	200 to 500 feet
Residence, etc*.	> 500 feet
Well or spring*.	500 feet to 4 miles
Flowing stream*	>200 feet
Wetlands*	< 1 mile
Drinking water*	5 to 15 miles
Aquatic target (length)	0.1 to 1 mile
Groundwater area.	Coastal Plain

All active HB 1205 areas are sanitary landfills (type="S", status="A") and therefore are land disposal facilities. For this prioritization, the assessments parameters refer to the HB 1205 area. The assessments of releases from other types of facilities may depend upon different criteria.

** Setbacks and distances to these features are measured from the HB 1205 area waste management unit boundary.*

Assessment Summary

PATHWAY	PATHWAY FACTORS Release	Route	Receptor	PATHWAY SCORE		
Soil Pathway	Medium	Medium	Medium	Medium		
Air Pathway	Low	Low	Low	Low		
Groundwater	High	High	Medium	High	**SITE SCORE:**	Low
Surface Water	Medium	Low	Medium	Low	**CLOSURE DATE:**	2020

Final Prioritization and Closure Schedule for HB 1205 Areas
Site Score Sheet

Site Identification

Permit No. 86

Site Name Appomattox Co SLF

Locality Appomattox

DEQ Region SCRO

Lat N 37 20 57.59

Lon W 78 44 33.61

Basis of Assessment

Site

Type of facility.	S
Facility status.	A
Land disposal facility.	YES
Combination (HB 1205/Subtitle D)	NO
Liner system.	YES
Leachate collection system.	YES
Groundwater monitoring trigger.	NO
Groundwater corrective action.	NO
Landfill gas monitoring trigger.	YES
Landfill gas corrective action.	YES

Environmental Setting:

Structure*	> 200 feet
Property line*	< 50 feet
Residence, etc*.	> 500 feet
Well or spring*.	500 feet to 4 miles
Flowing stream*	>200 feet
Wetlands*	< 1 mile
Drinking water*	5 to 15 miles
Aquatic target (length)	0.1 to 1 mile
Groundwater area.	Piedmont

All active HB 1205 areas are sanitary landfills (type="S", status="A") and therefore are land disposal facilities. For this prioritization, the assessments parameters refer to the HB 1205 area. The assessments of releases from other types of facilities may depend upon different criteria.

** Setbacks and distances to these features are measured from the HB 1205 area waste management unit boundary.*

Assessment Summary

PATHWAY	PATHWAY FACTORS Release	Route	Receptor	PATHWAY SCORE		
Soil Pathway	Medium	Medium	Medium	Medium		
Air Pathway	Medium	Low	Low	Low		
Groundwater	Low	Medium	Medium	Low	**SITE SCORE:**	Low
Surface Water	Medium	Low	Medium	Low	**CLOSURE DATE:**	2020

Final Prioritization and Closure Schedule for HB 1205 Areas
Site Score Sheet

Site Identification

Permit No. 582

Site Name Botetourt County Landfill

Locality Botetourt | DEQ Region WCRO | Lat N 37 27 45.40 | Lon W 79 59 52.44

Basis of Assessment

Site

Type of facility	S
Facility status	A
Land disposal facility	YES
Combination (HB 1205/Subtitle D)	YES
Liner system	YES
Leachate collection system	YES
Groundwater monitoring trigger	YES
Groundwater corrective action	NO
Landfill gas monitoring trigger	NO
Landfill gas corrective action	NO

Environmental Setting:

Structure*	> 200 feet
Property line*	> 500 feet
Residence, etc*	> 500 feet
Well or spring*	500 feet to 4 miles
Flowing stream*	>200 feet
Wetlands*	< 1 mile
Drinking water*	5 to 15 miles
Aquatic target (length)	0.1 to 1 mile
Groundwater area	Mountainous Terrain

All active HB 1205 areas are sanitary landfills (type="S", status="A") and therefore are land disposal facilities. For this prioritization, the assessments parameters refer to the HB 1205 area. The assessments of releases from other types of facilities may depend upon different criteria.

** Setbacks and distances to these features are measured from the HB 1205 area waste management unit boundary.*

Assessment Summary

PATHWAY	PATHWAY FACTORS Release	Route	Receptor	PATHWAY SCORE		
Soil Pathway	Medium	Medium	Medium	Medium		
Air Pathway	Low	Low	Low	Low		
Groundwater	High	High	Medium	High	**SITE SCORE:**	Low
Surface Water	Medium	Low	Medium	Low	**CLOSURE DATE:**	2020

Final Prioritization and Closure Schedule for HB 1205 Areas
Site Score Sheet

Site Identification

Permit No. 498

Site Name Bristol City LF

Locality Bristol

DEQ Region SWRO

Lat N 36 36 3.00
Lon W 82 8 51.00

Basis of Assessment

Site

Type of facility.	S
Facility status.	R
Land disposal facility.	YES
Combination (HB 1205/Subtitle D)	NO
Liner system.	YES
Leachate collection system.	YES
Groundwater monitoring trigger.	YES
Groundwater corrective action.	NO
Landfill gas monitoring trigger.	NO
Landfill gas corrective action.	NO

Environmental Setting:

Structure*	> 200 feet
Property line*	200 to 500 feet
Residence, etc*.	> 500 feet
Well or spring*.	500 feet to 4 miles
Flowing stream*	>200 feet
Wetlands*	> 1 mile
Drinking water*	5 to 15 miles
Aquatic target (length)	0.1 to 1 mile
Groundwater area.	Carbonate

All active HB 1205 areas are sanitary landfills (type="S", status="A") and therefore are land disposal facilities. For this prioritization, the assessments parameters refer to the HB 1205 area. The assessments of releases from other types of facilities may depend upon different criteria.

** Setbacks and distances to these features are measured from the HB 1205 area waste management unit boundary.*

Assessment Summary

PATHWAY	PATHWAY FACTORS Release	Route	Receptor	PATHWAY SCORE		
Soil Pathway	Medium	Medium	Medium	Medium		
Air Pathway	Low	Low	Low	Low		
Groundwater	High	High	Medium	High	**SITE SCORE:**	Low
Surface Water	Medium	Low	Medium	Low	**CLOSURE DATE:**	2020

Final Prioritization and Closure Schedule for HB 1205 Areas
Site Score Sheet

Site Identification

Permit No. 72

Site Name Franklin Co LF

Locality Franklin

DEQ Region WCRO

Lat N 36 55 37.31

Lon W 79 51 48.02

Basis of Assessment

Site

Type of facility	S
Facility status	A
Land disposal facility	YES
Combination (HB 1205/Subtitle D)	NO
Liner system	NO
Leachate collection system	NO
Groundwater monitoring trigger	YES
Groundwater corrective action	NO
Landfill gas monitoring trigger	YES
Landfill gas corrective action	YES

Environmental Setting:

Structure*	> 200 feet
Property line*	200 to 500 feet
Residence, etc*	> 500 feet
Well or spring*	< 500 feet
Flowing stream*	>200 feet
Wetlands*	< 1 mile
Drinking water*	5 to 15 miles
Aquatic target (length)	0.1 to 1 mile
Groundwater area	Piedmont

All active HB 1205 areas are sanitary landfills (type="S", status="A") and therefore are land disposal facilities. For this prioritization, the assessments parameters refer to the HB 1205 area. The assessments of releases from other types of facilities may depend upon different criteria.

** Setbacks and distances to these features are measured from the HB 1205 area waste management unit boundary.*

Assessment Summary

PATHWAY	PATHWAY FACTORS Release	Route	Receptor	PATHWAY SCORE		
Soil Pathway	Medium	Medium	Medium	Medium		
Air Pathway	Medium	Low	Low	Low		
Groundwater	High	Medium	High	High	**SITE SCORE:**	Low
Surface Water	Medium	Low	Medium	Low	**CLOSURE DATE:**	2020

Final Prioritization and Closure Schedule for HB 1205 Areas
Site Score Sheet

Site Identification

Permit No. 589

Site Name Rappahanock Regional Solid Waste Mgmt Bd

Locality Stafford | DEQ Region NRO | Lat N 38 23 1.72 | Lon W 77 24 32.08

Basis of Assessment

Site

Type of facility.	S
Facility status.	A
Land disposal facility.	YES
Combination (HB 1205/Subtitle D)	YES
Liner system.	YES
Leachate collection system.	YES
Groundwater monitoring trigger.	NO
Groundwater corrective action.	NO
Landfill gas monitoring trigger.	NO
Landfill gas corrective action.	NO

Environmental Setting:

Structure*	> 200 feet
Property line*	> 500 feet
Residence, etc*.	> 500 feet
Well or spring*.	500 feet to 4 miles
Flowing stream*	>200 feet
Wetlands*	< 1 mile
Drinking water*	5 to 15 miles
Aquatic target (length)	0.1 to 1 mile
Groundwater area.	Fall Zone

All active HB 1205 areas are sanitary landfills (type="S", status="A") and therefore are land disposal facilities. For this prioritization, the assessments parameters refer to the HB 1205 area. The assessments of releases from other types of facilities may depend upon different criteria.

** Setbacks and distances to these features are measured from the HB 1205 area waste management unit boundary.*

Assessment Summary

PATHWAY	PATHWAY FACTORS Release	Route	Receptor	PATHWAY SCORE		
Soil Pathway	Medium	Medium	Medium	Medium		
Air Pathway	Low	Low	Low	Low		
Groundwater	Low	Medium	Medium	Low	**SITE SCORE:**	Low
Surface Water	Medium	Low	Medium	Low	**CLOSURE DATE:**	2020

Final Prioritization and Closure Schedule for HB 1205 Areas
Site Score Sheet

Site Identification

Permit No. 62

Site Name Rockingham Co SLF

Locality Rockingham | DEQ Region VRO | Lat N 38 23 40.42 | Lon W 78 53 8.88

Basis of Assessment

Site

Type of facility	S
Facility status	A
Land disposal facility	YES
Combination (HB 1205/Subtitle D)	NO
Liner system	NO
Leachate collection system	NO
Groundwater monitoring trigger	YES
Groundwater corrective action	NO
Landfill gas monitoring trigger	YES
Landfill gas corrective action	YES

Environmental Setting:

Structure*	> 200 feet
Property line*	< 50 feet
Residence, etc*	> 500 feet
Well or spring*	500 feet to 4 miles
Flowing stream*	>200 feet
Wetlands*	< 1 mile
Drinking water*	5 to 15 miles
Aquatic target (length)	0.1 to 1 mile
Groundwater area	Carbonate

All active HB 1205 areas are sanitary landfills (type="S", status="A") and therefore are land disposal facilities. For this prioritization, the assessments parameters refer to the HB 1205 area. The assessments of releases from other types of facilities may depend upon different criteria.

** Setbacks and distances to these features are measured from the HB 1205 area waste management unit boundary.*

Assessment Summary

PATHWAY	PATHWAY FACTORS Release	Route	Receptor	PATHWAY SCORE		
Soil Pathway	Medium	Medium	Medium	Medium		
Air Pathway	Medium	Low	Low	Low		
Groundwater	High	High	Medium	High	**SITE SCORE:**	Low
Surface Water	Medium	Low	Medium	Low	**CLOSURE DATE:**	2020

Final Prioritization and Closure Schedule for HB 1205 Areas
Site Score Sheet

Site Identification

Permit No. 398

Site Name Va Beach LF #2 - Mt Trshmr II

Locality Virginia Beach | DEQ Region TRO | Lat N 36 47 10.97 | Lon W 76 12 1.51

Basis of Assessment

Site

Type of facility.	S
Facility status.	A
Land disposal facility.	YES
Combination (HB 1205/Subtitle D)	YES
Liner system.	YES
Leachate collection system.	YES
Groundwater monitoring trigger.	YES
Groundwater corrective action.	NO
Landfill gas monitoring trigger.	YES
Landfill gas corrective action.	YES

Environmental Setting:

Structure*	> 200 feet
Property line*	200 to 500 feet
Residence, etc*.	> 500 feet
Well or spring*.	500 feet to 4 miles
Flowing stream*	>200 feet
Wetlands*	> 1 mile
Drinking water*	> 15 miles
Aquatic target (length)	0.1 to 1 mile
Groundwater area.	Coastal Plain

All active HB 1205 areas are sanitary landfills (type="S", status="A") and therefore are land disposal facilities. For this prioritization, the assessments parameters refer to the HB 1205 area. The assessments of releases from other types of facilities may depend upon different criteria.

** Setbacks and distances to these features are measured from the HB 1205 area waste management unit boundary.*

Assessment Summary

PATHWAY	PATHWAY FACTORS Release	Route	Receptor	PATHWAY SCORE		
Soil Pathway	Medium	Medium	Medium	Medium		
Air Pathway	Medium	Low	Low	Low		
Groundwater	High	High	Medium	High	**SITE SCORE:**	Low
Surface Water	Medium	Low	Medium	Low	**CLOSURE DATE:**	2020

Final Prioritization and Closure Schedule for HB 1205 Areas
Site Score Sheet

Site Identification

Permit No. 513

Site Name Wise Co LF

Locality Wise

DEQ Region SWRO

Lat N 36 55 41.56
Lon W 82 42 50.33

Basis of Assessment

Site

Type of facility.	S
Facility status.	A
Land disposal facility.	YES
Combination (HB 1205/Subtitle D)	NO
Liner system.	YES
Leachate collection system.	YES
Groundwater monitoring trigger.	NO
Groundwater corrective action.	NO
Landfill gas monitoring trigger.	NO
Landfill gas corrective action.	NO

Environmental Setting:

Structure*	> 200 feet
Property line*	200 to 500 feet
Residence, etc*.	200 to 500 feet
Well or spring*.	500 feet to 4 miles
Flowing stream*	>200 feet
Wetlands*	< 1 mile
Drinking water*	< 5 miles
Aquatic target (length)	> 1 mile
Groundwater area.	Carbonate

All active HB 1205 areas are sanitary landfills (type="S", status="A") and therefore are land disposal facilities. For this prioritization, the assessments parameters refer to the HB 1205 area. The assessments of releases from other types of facilities may depend upon different criteria.

** Setbacks and distances to these features are measured from the HB 1205 area waste management unit boundary.*

Assessment Summary

PATHWAY	PATHWAY FACTORS Release	Route	Receptor	PATHWAY SCORE		
Soil Pathway	Medium	Medium	Medium	Medium		
Air Pathway	Low	Medium	Medium	Low		
Groundwater	Low	High	Medium	Medium	**SITE SCORE:**	Low
Surface Water	Medium	Low	High	Medium	**CLOSURE DATE:**	2020

Appendix D -- Responses to Public Comments

Responses to Public Comments

Code	Comment	Response
2-91	The County of Accomack agrees with the site rankings assigned to the South Landfill (medium) and the North Landfill (low).	The Department agrees that the Revised Prioritization accurately scored these sites.
2-545	The County of Henrico is requesting the Department to remove the Springfield Road Landfill from the Prioritization. Phase 1 was constructed with a soil liner in 1989 and was capped in 1994. The facility should be removed from the Prioritization since: the permit was amended by the Department on June 1, 1994, after the October 9, 1993 date; waste placed in disposal areas prior to October 9, 1993 has been capped in accordance with the facility permit; and waste landfilled at the facility since April 1994 has been placed on liners that are compliant with Subtitle D and the Virginia Solid Waste Management Regulations, Amendment 1, including the piggybacked slope of Phase 1.	The Department has carefully reviewed the documentation submitted by the County of Henrico, and the additional documentation supplied at the request of the Department. The County has established to the Department's satisfaction that all waste is being disposed of on areas permitted after October 9, 1993, and that areas of the landfill permitted prior to October 9, 1993 have been closed. Therefore, this site has been removed from the Final Prioritization.
2-86	Appomattox County approves of the revised prioritization ranking for the Appomattox County Landfill Permit No. 86	The Department agrees that the Revised Prioritization accurately scored this site.

2-29	The County installed an active landfill gas (LFG) extraction and control system at the Prince William County Landfill on June 30, 1998. In accordance with the New Source Performance Standards, the County performs and meets all requirements of the landfill gas surface emission monitoring. The monitoring data showed off-site migration that triggered the LFG into the corrective action exclusively around a neighboring "junk yard" property.	The Prioritization evaluates the landfill gas corrective action installed at the facility. The landfill gas corrective action feature is scored "yes" if a facility has installed a landfill gas control system that has reduced methane concentrations at property boundaries to below the lower explosive limit (LEL). The gas extraction and control system installed by Prince William County has shown through complete monitoring data that methane concentrations at the property boundary are consistently below the lower explosive limit. The site score sheet has been changed to reflect that the site's active landfill gas extraction system is controlling landfill gas.
2-29	Prince William County has entered into a Consent Order with the Department of Environmental Quality. The Consent Order proposed a schedule to bring the landfill into compliance with the Waste Management Act, the Regulations, and the Permit. The schedule of compliance required the County to complete the installation of Phase II (LFG extraction trench) of the gas remediation system by August 1, 2001.	In compliance with the consent order, the facility has been submitting landfill gas monitoring data weekly. The Department has reviewed this data, and the data demonstrates that the active landfill gas extraction and control system is controlling landfill gas at the site. The site score sheet has been changed to reflect that the site's active landfill gas extraction system is controlling landfill gas.

2-29	These wells are located around the new property boundary of the "junk yard" and were showing high concentrations of methane prior to the installation of LFG extraction trench. It is apparent that the LFG extraction trench designed and constructed to "state of the art" technology is working effectively. However, it may take time beyond the May 23, 2001, deadline set for receiving comments, to reach equilibrium in these wells, along the "junk yard" property boundary. The proper adjustment of the vacuum levels will be needed during next few weeks to bring the gas concentrations below the regulatory levels in this area.	See response above.
2-29	Prince William County states that based on the trend of the LFG data collected and shown on the Monitoring Sheet, it strongly believes that the active LFG trench is effective in controlling the off-site gas migration occurring at the "junk yard" property. As of May 21, 2001, the gas readings are below the regulatory levels in all wells except one, i.e., well 14, around the new property boundary. The readings in well 14 will also go below the level within the time frames stated in the Consent Order.	See response above.

2-29	Prince William County states the ranking field entitled “Landfill Gas corrective action” under "Basis of Assessment" should be set to “YES”, and the Release Pathway Factor for LFG be changed from “High” to “Medium”, thus changing the LFG Pathway score to “Medium”.	The Prioritization evaluates the landfill gas corrective action installed at the facility. The landfill gas corrective action feature is scored "yes" if a facility has installed a landfill gas control system that has reduced methane concentrations at property boundaries to below the lower explosive limit (LEL). The gas extraction and control system installed by Prince William County has shown through complete monitoring data that methane concentrations at the property boundary are consistently below the lower explosive limit. The site score sheet has been changed to reflect that the site's active landfill gas extraction system is controlling landfill gas.
2-29	The facility has exceeded approved ground water protection standards (GPS) at one location (SMW-11s) and has initiated an assessment of corrective measures. The assessment has consisted of an evaluation of the nature and extent of the impacted ground water, surface water sampling, shallow in-situ ground water sampling, and the installation and sampling of new ground water monitoring wells. The sampling and results of the surface water and in-situ ground water analysis have not shown any detection.	Prince William County has implemented an assessment of corrective action but has not implemented a corrective action plan. Since a corrective action plan has not been implemented, the Department cannot concur that the corrective action has been effective in reducing hazardous constituents below the approved GPS. No change has been made to the site score sheet for this pathway factor.

2-29	Prince William County is proposing a presumptive remedy, natural attenuation, for the localized impacted ground water and ground water will be monitored in accordance with the requirements of Amendment No. 2 of Solid Waste Management Regulation. With proper monitoring and installation of the cap over the unlined portions of the existing landfill (County is in the process of installing this cap), the impacted ground water should continue to degrade from the source area near SMW-11s. Monitoring of the new deep and down-gradient wells will be utilized to evaluate the effectiveness of the remedy. It should also be noted that Prince William County owns all of the property down-gradient from SMW-11s for a distance of over 1000 feet. There are no nearby drinking water wells or intakes.	See response above. The distance to drinking water wells and intakes has been evaluated in the receptor factors for ground water and surface water.
2-29	Based on the additional information provided and the revised ranking system, Prince William County feels that the ranking field entitled “Ground Water corrective action” should be set to “YES”, and the Release Pathway Factor for Ground Water be changed from “High” to “Medium”, thus changing the Ground Water Pathway score to “Medium”.	See response above.
2-29	With the revised information provided to the Department, Prince William County states their revised score should be medium.	The site score sheet has been changed to reflect that the site's active landfill gas extraction system is controlling landfill gas. The site has been re-evaluated using the revised site score sheet.

2-31	The Town of South Boston believes that revised design closure grades should be used when determining the prioritization and closure schedule for the landfill, rather than the arbitrary date of December 31, 2007. By allowing the landfill to close at final grades, a more efficient and environmentally protective configuration will be achieved.	Allowing a site to continue to operate until final grades are met does not establish a scheduled date for the disposal area to cease accepting waste in the affected disposal areas, as is required by statute. Section 1408.1 N of the Code of Virginia allowed certain facilities to operate until vertical capacity was reached. The 2000 General Assembly amended ' 10.1-1413.2 of the Code of Virginia. This statutory change directed the Department to develop a schedule for facilities to cease accepting waste in such areas based on the greatest threat to human health and the environment. The closure schedule was modified in the Revised Prioritization and gives facilities adequate time to prepare to reach the minimum grade required by the Virginia Solid Waste Management Regulations (VSWMR).
2-31	The Town of South Boston states that the Revised Prioritization scores a facility that has never had a landfill gas exceedance or related problem high for the air pathway. South Boston requests that its air pathway ranking be changed to medium since the facility has never experienced a LFG exceedance and the migration of landfill gas is unlikely based on surrounding streams.	The model scores the air release factor, not air pathway, high if a facility does not have a liner installed at the facility. The air release and the ground water release are scored similarly. The model evaluates the potential for a release. Liners are engineering controls that help prevent a release of leachate and landfill gas to the environment. Facilities without a liner lack a barrier between the facility and the environment. Facilities without liners are scored high for their threat for air and ground water releases. Additionally, if a facility is exceeding the LEL at the property boundary or if the facility has entered ground water assessment monitoring, then the liner is not preventing a release to the environment. The release for the air or ground water pathway is then scored high, unless there has been an effective corrective action. Facilities without liners present a higher threat of contaminating the environment than facilities with liners. Therefore, the South Boston Landfill is scored high for the

		ground water release and air release factors.
2-31	The Town of South Boston states that a permanent leachate collection trench has been installed around the perimeter of the facility. The collection trench discharges into a sanitary sewer. Also erosion and sediment control structures have been constructed to collect stormwater, including two new sediment traps and a stormwater management basin. During the original prioritization these structures were being constructed and were not included in the evaluation. The Town requests that these additional environmentally protective control structures should be included in the evaluation of the facility.	The model only considers leachate collection systems that have been installed under the entire waste unit. Toe drains and leachate trenches are not fully effective leachate collection systems, since they only collect leachate from the perimeter of the facility, not underneath the waste. Current regulations require leachate collection under the entire waste unit. Erosion and sediment control structures are not evaluated in the model. Even with these erosion and sediment control structures, a site may still pose a potential threat to human health and the environment due to proximity to flowing streams or wetlands.
2-92	Halifax County requests that Halifax County Permit No. 92 be reviewed further prior to determining whether or not the landfill is to be included in the Prioritization.	The Department met with Halifax County to discuss its landfill permit. As a result of the meeting, the Halifax County Landfill is being included in the Final Prioritization and Closure Schedule for HB 1205 Disposal Areas.
2-49	The City of Martinsville believes that the facility should be allowed to receive CDD waste in the 1205 area after the disposal of municipal solid waste has ceased. This would allow for the facility to be constructed to final contours that would allow maximum runoff of stormwater away from the waste fill.	The statute directs the Department to establish a schedule for facilities to cease accepting **solid waste** in disposal areas permitted before October 9, 1993. By definition, solid waste includes municipal solid waste and construction/demolition/debris (CDD) waste. Therefore, the statute does not allow for continued landfilling of CDD waste after the scheduled date. Additionally, continued landfilling of CDD waste rather than capping the disposal area would increase the infiltration of water through the waste mass that would potentially reach ground water or surface water. The disposal area must be closed to prevent further infiltration of

		water through the waste.
2-49	The City of Martinsville also states that allowing the facility to operate for a longer amount of time would allow for the accumulation of additional funds to assure that the entire facility can be managed and closed in the most environmentally protective way possible and to mitigate any potential affects to ground or surface water quality that may have occurred.	The governing statute requires that the Department prioritize sites based on the greatest threat to human health and the environment. The statute does require facilities "to prepare financial closure plans" for affected disposal areas. In the City of Martinsville's HB 1205 submission in 1993, the City estimated that the disposal area would reach vertical capacity in 2005. Additionally, as required by statute, the City acknowledged in 1993 that it was familiar with financial responsibility requirements. The disposal area has been assigned a closure date of 2007. The facility estimated in its closure plan, approved August 8, 2000, that final grades would be reached in 2005. The General Assembly has recognized that properly closing municipal solid waste disposal areas can entail significant costs, and it has created a special fund for that purpose. If moneys are allocated to the Virginia Landfill Clean-up and Closure Fund, the Department is prepared to disburse grants in accordance with 10.1-1413.2. to assist with closure of facilities.
2-49	The City of Martinsville requests that Department to allow the facility to landfill MSW until 2012 and to continue landfilling CDD waste in the landfill through 2020.	The Department is required to follow its statutory mandate. The Department has prioritized the City's site in a consistent and objective manner with other sites subject to this Final Prioritization. It has reviewed its model and verified site-specific data. Based on the review, a closure date of 2007 has been assigned to the affected disposal areas of the City of Martinsville Landfill.

2-429	In October 2000 Fluvanna County submitted information to Department stating that, in the County's opinion, demonstrated that the County landfill's ranking should be revised from medium to low.	The Department reviewed the information submitted, performed one or more site visits, and made corrections to the site score sheet to more accurately reflect conditions at the Fluvanna County Landfill. As a result of the review, the Revised Prioritization scored the Fluvanna County Landfill high with a proposed closure date of 2007.
2-429	Fluvanna County states a closure date of 2024 was projected in a closure plan dated February 1999 that has been placed in the operating record of the facility. A closure date of 2020 (4 years earlier than projected in the closure plan) would leave the county 20 years to set aside the requisite funds for complete closure of the facility, and would not place a financial burden on the county.	The governing statute requires that the Department prioritize sites based on the greatest threat to human health and the environment. The statute does require facilities "to prepare financial closure plans" for affected disposal areas. In Fluvanna County's HB 1205 submission in 1993, the County estimated that the disposal area would reach vertical capacity in 1995. Additionally, as required by statute, the County acknowledged in 1993 that it was familiar with financial responsibility requirements. The facility has been assigned a closure date of 2007. The General Assembly has recognized that properly closing municipal solid waste disposal areas can entail significant costs, and it has created a special fund for that purpose. If moneys are allocated to the Virginia Landfill Clean-up and Closure Fund, the Department is prepared to disburse grants in accordance with 10.1-1413.2. to assist with closure of facilities.
2-429	In the Revised Prioritization, the Fluvanna County Landfill was moved from a medium to a high category even though the potential for ground water threat was downgraded.	The Prioritization evaluates four pathways (air, surface water, ground water, and soil) when prioritizing a disposal area for closure. A site's pathway score may have changed as a result of updated information from documentation and site visits. If a pathway score was modified, then the overall facility score may have changed as a result.

2-429	The Department's responses to comments regarding the development of a formal administrative appeal process and provisions for future revision of a ranking if a site reverts to detection monitoring from assessment monitoring is puzzling. To the County these responses represent an adversarial posture that is not conducive to a positive working relationship with the regulated community to resolve issues in a fair and balanced manner that is truly protective of the environment.	The statute directs the Department to "establish a schedule … requiring municipal solid waste landfills to cease accepting solid waste in… disposal areas permitted before October 9, 1993." The Department interprets the statute to mean that one schedule is to be issued, not a series of changing schedules assigning closure dates. Such a system would be unworkable in practice and may not allow adequate public notice and comment on a prioritization of many sites. The model considers four pathways, and multiple parameters, not just the ground water monitoring phase of the facility, when prioritizing the facility for closure. The process is not intended to be adversarial. In prioritizing facilities for closure, the Department has held over 20 meetings with individual facilities, has held six public meetings, and has held two public comment periods. The Department has been willing to discuss the Prioritization with all affected parties, and the Department did meet with the facility submitting this comment.
2-429	Fluvanna County requests the Department to clarify with specifics the mandated process and the clear intent of the legislation referenced in the Department's responses.	Chapter 308 of the 2000 Acts of Assembly speaks for itself. It has been quoted and cited extensively. The Department's interpretation and implementation of its legislative directive has been set out in the Preliminary, Revised, and Final Prioritizations, and associated figures, tables, and appendices, as well as the notices in the *Virginia Register*.
2-429	Fluvanna County states that landfill gas has not been detected at points of compliance. Since there is no release demonstrated at this site, and since the facility does have a landfill gas control plan to implement should there be a release, the release should score "low." However, recognizing that	The air release and the ground water release are scored similarly. The model evaluates the potential for a release. Liners are engineering controls that help prevent a release of leachate and landfill gas to the environment. Facilities without a liner lack a barrier between the facility and the environment. Facilities without liners are scored high in their

	there remains a potential for release, because the site is unlined, the county believes an appropriate release factor score for the air pathway for this facility is "medium."	threat for air and ground water releases. Additionally, if a facility is exceeding the LEL at the property boundary or if the facility has entered ground water assessment monitoring, then the liner is not preventing a release to the environment. The release for the air or ground water pathway is then scored high, unless there has been an effective corrective action. Facilities without liners have a higher potential to contaminate the environment than facilities with liners. Therefore, the Fluvanna County Landfill is scored high for the air release factor. Fluvanna County states that it has a landfill gas control plan to implement should there be a release. All facilities are required by regulation to have a plan to control landfill gas. Therefore, the existence of a gas control plan (or gas management plan) was not evaluated in the model.
2-429	The Department's response to the earlier comments of Fluvanna County did not take into account that Fluvanna County has a landfill gas control plan that would be implemented if an exceedance did occur. A landfill gas management system would be put in place to control the migration of landfill gas to the property boundary. This would then be equivalent to acknowledging existing corrective actions as stated on page 7 of the Revised Prioritization.	The Department disagrees that the existence of a landfill gas management plan is equivalent to an existing, effective corrective action. If a facility's gas is being controlled by an effective landfill gas corrective action, then the facility has more control over the landfill gas generated at the site. A gas management plan is a plan of action that a facility would take in the future, whereas an effective landfill gas corrective action is a plan that has been successfully implemented and is consistently and completely reducing landfill gas levels below the LEL. Many facilities have had gas management plans that when implemented, have not immediately controlled the migration of landfill gas. Additionally, not all remedial plans have been effective, without modifications, in controlling the migration of landfill gas.

2-429	Fluvanna County suggests modifying the air release. Otherwise, the current model "rewards" sites that have had exceedences, and have implemented corrective actions, but penalizes sites that have had no exceedance but that have control plans in place that provide for the ready implementation of effective management and control systems. A facility with no liner that has not exceeded the LEL at the property boundary, that has a gas control plan should score medium.	The Department disagrees. The Department believes that the presence of a liner at a facility is more protective of the environment. Therefore, the model scores facilities with liners different from facilities without liners. If a facility's gas is being controlled by an effective landfill gas corrective action, then the facility has more control over the landfill gas generated at the site. A gas management system is a plan of action that a facility would take in the future, whereas an effective landfill gas corrective action is a plan that has been successfully implemented and is consistently reducing landfill gas levels below the LEL. The Department views an effective landfill gas corrective action as a means by where the release of landfill gas is being controlled. Many facilities have had gas management plans that when implemented, have not immediately controlled the migration of landfill gas. Additionally, not all remedial plans have been effective, without modifications, in controlling the migration of landfill gas.
2-429	Fluvanna County states that the release factor for the air pathway should be scored low since the design capacity is below 2.5 million cubic meters, since no landfill gas has been detected at the landfill gas monitoring compliance points, and that a landfill gas control plan is in place to remedy an exceedance. Combined with the route factor score of low and a receptor score of low, the facility's air pathway score would be low.	In response to comments received on the Preliminary Prioritization, the facility's design capacity has been removed as a data input for the model. The model does evaluate the potential for a release of landfill gas from the facility. If a liner is installed at the facility, the liner is viewed as an engineering control that may prevent a release to the environment. Facilities without a liner lack a barrier between the facility and the environment. Facilities without liners are scored high for the air release. Additionally, if a facility is exceeding the LEL at the property boundary, then the liner is not preventing migration of landfill gas. The release for the air pathway is then scored high. Facilities without liners have a higher potential to contaminate the environment than

		facilities with liners. Therefore, the Fluvanna County Landfill is scored high for the air release.
2-429	Fluvanna County states that it reverted to Detection Monitoring for ground water with the sampling event report submitted to the Department in October 2000.	The facility has sent a letter to the Department stating that it was reverting to detection monitoring, but the facility has not received Departmental concurrence that the facility should revert to the detection monitoring program. The model first considers the presence of a liner when scoring the ground water release factor. Since the disposal area does not have a liner, the ground water release is scored high. The ground water monitoring phase is not considered when scoring this site for the ground water release factor.
2-429	In Appendix E of the Revised Prioritization, the Department mistakenly listed that Fluvanna County identified the site was in assessment monitoring.	The Department met with Fluvanna County on September 20, 2000 to discuss the Preliminary Prioritization and closure schedule and to submit additional public comments to the Department. The Department's notes from the meeting state that the facility acknowledged that it has participated in the assessment monitoring program. The facility sent a letter to the Department stating that it was reverting to detection monitoring, but the facility has not received Departmental concurrence that the facility should revert to the detection monitoring program. The model first considers the presence of a liner when scoring the ground water release factor. Since the disposal area does not have a liner, the ground water release is scored high. The ground water monitoring phase is not considered when scoring this site for the ground water release factor.

2-429	The ground water route factor should be scored medium since the facility is situated in the Piedmont Ground Water Area and the ground water receptor should be scored low since there is no well, spring or structure downgradient of the landfill between the waste unit boundary and Bremo Creek and beyond.	The Final Prioritization scores the Fluvanna County Landfill's ground water route medium. The ground water receptor is scored medium, because a well or spring is located between 500 feet and 4 miles of the disposal area.
2-429	Fluvanna County believes that the field measurement made by the Department's inspector was made from the stream to the edge of the HB 1205 area as depicted on the map attached to the comments submitted to the Department in October 2000. The Department's measurements were not along the flow path that any surface water release would have to follow.	The distance to a flowing stream was measured from the edge of the HB 1205 disposal area to the edge of the flowing stream. All measurements to flowing streams have been taken in a straight line. The measured distance is a setback criteria. When siting a new facility, the waste unit boundary must be greater than 100 feet from the stream. No consideration is given to the distance surface water would flow prior to entering the stream. Site topography is altered when facilities are constructed. Since all measurements of this feature were taken using the same method, all facilities can be compared.
2-429	Fluvanna County states that the nearest flowing stream is Bremo Creek and that Department has incorrectly determined that the aquatic target length is less than a mile.	The aquatic target length is the distance a stream flows until it meets a confluence with another stream. This distance is measured from the point surface water would enter a stream to the confluence with another stream. The aquatic target length for this facility is .1 to 1 mile. The Department incorrectly stated that the facility's aquatic target length was greater than a mile in response to previous comments, but the facility's site score sheet and the data used to score the facility was correct.

2-429	Fluvanna County states that the horizontal distance from the HB 1205 area to the intermittent stream is 175 feet, but that the flow path is intercepted and diverted through a sediment pond. The length of this flow path to the intermittent stream is intercepted and diverted through a sediment pond. The length of this flow is 400 ft.	The distance to a flowing stream was measured from the edge of the HB 1205 disposal area to the edge of the flowing stream. All measurements to flowing streams have been taken in a straight line. The measured distance is a setback criteria. When siting a new facility, the waste unit boundary must be greater than 100 feet from the stream. No consideration is given to the distance surface water would flow prior to entering the stream. Site topography is altered when facilities are constructed. Since all measurements of this feature were taken using the same method, all facilities can be compared.
2-429	Fluvanna County states that the surface water pathway should be scored as follows: release - medium; route - low since the flowing stream setback is approximately 5100 feet from the facility, the facility has an approved wetlands demonstration allowing for monitoring on a semi-annual basis, and has no impact on wetlands that may be less than a mile from the landfill; and receptor - low since the aquatic target is mid-range and the streams and wetlands are at the distances discussed above under the route factor.	Fluvanna County's measurement for the flowing stream setback is the estimated distance water would flow after being diverted by a berm prior to entering a flowing stream. The criteria used in the prioritization are set back criteria for permitting a new facility. When permitting a new facility, at least 100 feet must be maintained between the waste and a flowing stream. The flow path measured by the County may not be the path that all surface water runoff follows prior to entering a stream. The model considers the distance to streams and the Department is aware that the facility has removed waste within 100 feet of the stream to comply with a condition of its permit. The facility's site score sheet has been changed to reflect that waste is located between 100 and 200 feet from the stream.
2-429	Fluvanna County states that their landfill should be scored low and requests the Department to re-evaluate the facility's ranking.	The Department has re-evaluated the facility based on its comments and the site visits and re-scored the facility.

2-398	As a result of a recent site visit by Department staff the following information should be changed on Virginia Beach Landfill's site score sheet: the nearest off site structure is greater than 500 feet from the waste unit boundary; the facility does not discharge surface water to Stumpy Lake; the route and receptor scores for the air pathway should be revised from Medium to low to reflect the greater than 200 ft setback distance to the nearest structure or residence; and the receptor score for the surface water pathway should be revised to low given the facility does not discharge surface water to a drinking water source (Stumpy Lake).	As a result of an additional site visit, the site score sheet is being revised to state that the nearest structure or residence is greater than 500 feet away. Additionally, the site does not discharge to the Stumpy Lake drainage basin, where the potential drinking water intake is located. Both of these factors were verified in a May 2001 site visit by Department staff. The site score sheet has been updated to reflect these changes.
2-398	Virginia Beach states that ongoing landfill gas corrective measures including expansion and upgrade of the facility's active landfill gas collection and control system will result in revision of the release factor from High to Medium, and further reducing the air pathway score to low, and the overall pathway score to low.	The Prioritization evaluates the landfill gas corrective action installed at the facility. The landfill gas corrective action feature is scored "yes" if a facility has installed a landfill gas control system that has reduced methane concentrations at property boundaries to below the lower explosive limit (LEL). The gas extraction and control system installed by the City of Virginia Beach has shown through complete monitoring data that methane concentrations at the property boundary are consistently below the lower explosive limit. The site score sheet has been changed to reflect that the site's active landfill gas extraction system is controlling landfill gas.

2-398	Virginia Beach states that the ground water pathway should be revised from high to medium. Documentation of the "original mound" closure area can be provided to the Department as well as ground water data which identifies the "original mound" as the source of the statistically significant increase in the ground water. This data supports the City's contention that the facility is in assessment monitoring due to the original mound area, not the HB 1205 area, and that the closure of the HB 1205 area will not necessarily result in a decrease in waste constituents found present in monitoring wells down-gradient of the "original mound" area.	The Department does not agree that the contaminants detected at the facility have been proven to come from the original mound area and that closure of the existing facility would not stop migration of contamination. Infiltration of water through the open phase is occurring and may be contributing to the release of contaminants from the site. Phase 1 and the "original mound" area are not hydraulically separated. Therefore, the Department is unable to determine the source of the contamination. The Department can only determine that as a result of ground water monitoring, a statistically significant increase in hazardous constituents has occurred.
2-398	Virginia Beach states that the ground water receptor score should be revised from a medium to a low since the facility has submitted documentation that demonstrates the existing borrow pits act as a barrier to ground water flow. The City is in receipt of a letter from the Department stating that the facility is not required to monitor ground water quarterly in accordance with Va. Code 10.1-1408.5 requirements due to hydraulic separation attributable to extensive borrow pit dewatering activities which produce an incomplete or truncated pathway and hydraulic isolation. Virginia Beach reiterates that the borrow pits represent incomplete or truncated ground water pathway independent of on-going dewatering activities.	In the Department's October 27, 2000, letter to Virginia Beach, the Department states that because of dewatering activities at the Williams Gravel Pit, the Virginia Beach Landfill #2, permit number 398, is not required to monitor ground water on a quarterly basis. In this letter the Department does state that if dewatering activities are discontinued at the William Gravel Pit, the applicability of Section 10.1-1408.5 Code of Virginia will be re-evaluated. The facility's wetland demonstration is contingent upon continued dewatering activities in the area. Since the City cannot control these off-site activities that impact the ground water flow at the site and since dewatering activities may be discontinued at the Williams Gravel Pit at any time, the Department is not able to concur that the ground water will always be isolated from potential contamination from the site. Additionally, in the facility's permit it states "It is not known

		how long the Williams pit will be in operation, though it is anticipated that the pit will close before landfilling activities cease. Borrow area 2 will cease operation concurrently with landfill activities. Dewatering will cease when the respective quarrying activities cease, thereby allowing the water table to return to it's natural configuration." This supports not using the modified ground water flow in the model.
2-398	Virginia Beach states that the air pathway should be revised. The release factor for the air pathway should be changed to low since subsequent ongoing corrective measures appear effective in maintaining regulatory compliance. Data included in the City's submission indicates that the expansion and upgrade of the landfill gas collection and control system comprised of additional wells and increased capacity of blowers is an effective corrective measure in controlling landfill gas.	The Prioritization evaluates the landfill gas corrective action installed at the facility. The landfill gas corrective action feature is scored "yes" if a facility has installed a landfill gas control system that has reduced methane concentrations at property boundaries to below the lower explosive limit (LEL). The gas extraction and control system installed by the City of Virginia Beach has shown through complete monitoring data that methane concentrations at the property boundary are consistently below the lower explosive limit. The site score sheet has been changed to reflect that the site's active landfill gas extraction system is controlling landfill gas. The site has been re-scored using this data.
2-398	Virginia Beach states that the air release and air route should be scored low since the distance to the nearest structure or residence has been field verified by Department staff.	The Department has revised the site score sheet to reflect the correct distance to the nearest structure or residence. The facility has been re-evaluated with the corrected data.

2-398	Virginia Beach states that since the Department agrees that the dewatering activities isolate the facility from wetlands, that the Department should also give the facility credit for the same dewatering activities providing a truncated or incomplete ground water pathway on the ground water receptor pathway.	The facility's wetland demonstration is contingent upon continued dewatering activities in the area. Since the City cannot control these off-site activities that impact the ground water flow at the site and since dewatering activities may be discontinued at the Williams Gravel Pit at any time, the Department is not able to concur that the ground water will always be isolated from potential contamination from the site. Additionally, the facility's permit states "It is not known how long the Williams pit will be in operation, though it is anticipated that the pit will close before landfilling activities cease. Borrow area 2 will cease operation concurrently with landfill activities. Dewatering will cease when the respective quarrying activities cease, thereby allowing the water table to return to it's natural configuration." This supports not using the modified ground water flow in the model.
2-398	Virginia Beach states that a recent site inspection by Department staff on May 8, 2001, confirms no off-site drainage to Stumpy Lake (a potential drinking water source). The revised surface water receptor score should be medium.	During a site visit in May 2001, Department staff verified that the site does not discharge to the Stumpy Lake drainage basin, where the potential drinking water intake is located. The site score sheet has been updated to reflect this change.
2-398	Virginia Beach states that as a result of a site visit on May 8, 2001, the distance to structures should be listed on the score sheet as greater than 500 feet. This data change would score both the air route and release factors low.	As a result of a site visit in May 2001, the site score sheet is being revised to state that the nearest structure or residence is greater than 500 feet away. The site score sheet has been updated to reflect this data.
2-398	Virginia Beach states that the air release factor should be reduced from high to medium based on on-going implementation of corrective measures.	The Prioritization evaluates the landfill gas corrective action installed at the facility. The landfill gas corrective action feature is scored "yes" if a facility has installed a landfill gas control system that has reduced methane concentrations at property boundaries to below the lower explosive limit

		(LEL). The gas extraction and control system installed by the City of Virginia Beach has shown through complete monitoring data that methane concentrations at the property boundary are consistently below the lower explosive limit. The site score sheet has been changed to reflect that the site's active landfill gas extraction system is controlling landfill gas.
2-398	Virginia Beach states that the surface water receptor should be reduced from high to medium based on the distance to a drinking water source being greater than 5 miles.	The site score sheet has been revised to show that the distance to a surface drinking water source is greater than 15 miles.
2-398	The mere fact a facility has entered into the assessment monitoring program does not confirm the facility is impacting the environment. Virginia Beach maintains that its score for ground water release should be changed from high to low. Site specific consideration should be given to natural attenuation or other active control measures that may be readily utilized within the facility property limits under the control of the City. The effective result of natural attenuation within the facility buffer zone is to mitigate any impact on public health and the environment as evidenced by results of site specific REAMS analysis which represents a more sophisticated tool as developed by the Department.	As a result of detecting a statistically significant increase in hazardous constituents, the facility implemented an assessment monitoring program in 1997. Monitoring data indicates that hazardous constituents are being detected. The facility has had the option of performing an alternate source demonstration, and the Director has not determined that the constituents are from a source other than the landfill. The REAMS model is used when conducting a risk assessment. Since the risk assessment data is not available for all sites, the conclusions reached by risk assessments are not evaluated in prioritizing sites.

2-398	The City states that the facility entered the assessment monitoring program as a result of pre-existing contamination emanating from the previously closed "original mound." Continued waste filling in Phase I HB 1205 area has not been connected with observed statistically significant increase in hypothetical waste constituents detected at monitoring well locations downgradient of the "original mound" area. The "original mound" area was closed in 1984 and provided with a low permeability earthen cap that effectively separates it from the HB 1205 area which has been provided with a base liner and leachate collection and removal system. Lingering low levels of contamination [no matter how small] resulting from pre-existing facility operations may result in closure of so-called HB 1205 portions of the facility that may or may not be responsible for any observed evidence of a release. In this case early closure of the HB 1205 portions of the facility will NOT necessarily reduce the potential release of contaminants.	The Department does not agree that the contaminants detected at the facility have been established as originating from the original mound area or that closure of the existing facility would not reduce migration of contaminants. Infiltration of water through the open phase is occurring and may be contributing to the release of contaminants from the site. Phase 1 and the "original mound" area are not hydraulically separated. Therefore, the Department is unable to confirm the source of the contamination. The Department can only determine that as a result of ground water monitoring, a statistically significant increase in hazardous constituents has occurred.

2-398	The model's ground water pathway scoring (including the route factor) failed to take into account the effect of the existing borrow pit de-watering activities on the proximity of the ground water aquifer to the soil surface as well as incomplete pathway which effectively separates the landfill from potential public health and environmental receptors. Any future changes in dewatering activities could be used for subsequent re-evaluation of ground water route and pathway scoring. In addition route factor is independent of actual dewatering activities.	The facility's wetland demonstration is contingent upon continued dewatering activities in the area. Since the City cannot control these off-site activities, that impact the ground water flow at the site and since dewatering activities may be discontinued at the Williams Gravel Pit at any time, the Department is not able to concur that the ground water will always be isolated from potential contamination from the site. Additionally, in the facility's permit it states "It is not known how long the Williams pit will be in operation, though it is anticipated that the pit will close before landfilling activities cease. Borrow area 2 will cease operation concurrently with landfill activities. Dewatering will cease when the respective quarrying activities cease, thereby allowing the water table to return to it's natural configuration." This supports not using the modified ground water flow in the model.
2-398	Virginia Beach states that since the Department states that contaminant levels are an appropriate consideration in deciding what corrective action may be appropriate at the site, then it would be prudent to apply this same consideration as to whether or not a so-called 'release' has any potentially significant impact according to the concentration of constituents found present and potential for natural attenuation or other site specific factors affecting incomplete or truncated pathway.	The Department cannot concur with this statement. This facility has been in the assessment monitoring program since 1997. Since the facility has entered the assessment monitoring program, the release factor for the groundwater pathway is scored high since monitoring data shows statistically significant increases of hazardous constituents have occurred. The model examines the threat to human health and the environment.

2-398	The City of Virginia Beach requests the Department to give greater consideration to relatively large financial impact in comparison to no demonstrated risk to public health and safety based on more sophisticated modeling [via REAMS].	The governing statute requires that the Department prioritize sites based on the greatest threat to human health and the environment. The statute does require facilities "to prepare financial closure plans" for affected disposal areas. In the City of Virginia Beach's HB 1205 submission in 1993, the City estimated that the disposal area would reach vertical capacity in 1998. Additionally, as required by statute, the City acknowledged in 1993 that it was familiar with financial responsibility requirements. The General Assembly has recognized that properly closing municipal solid waste disposal areas can entail significant costs, and it has created a special fund for that purpose. If moneys are allocated to the Virginia Landfill Clean-up and Closure Fund, the Department is prepared to disburse grants in accordance with Va. Code § 10.1-1413.2. to assist with closure of facilities.
2-398	The City of Virginia Beach maintains that Landfill #2 should be classified as LOW risk.	The Department has scored all sites included in the Prioritization using objective and consistent criteria. The facility has been re-evaluated and assigned a closure date.
2-398	The City of Virginia Beach states the Department's methodology used non-site specific data inputs which unfairly characterized the Virginia Beach Landfill #2 as medium risk when in fact the relative risk is very low in comparison to other facilities without the benefit of the site specific features which are unique to the City's facility.	The Department has scored all sites included in the Prioritization using objective and consistent criteria. The facility has been re-evaluated and assigned a closure date.

2-398	The City of Virginia Beach states that entering into the assessment monitoring phase does not confirm the facility is impacting the environment and is prejudicial inasmuch as site-specific conditions and concentrations of contaminants in monitoring wells are absolutely necessary in establishing an relative ranking and prioritization.	As a result of detecting a statistically significant increase in constituents, the facility implemented an assessment monitoring program in 1997. Monitoring data indicates that constituents are being detected. The facility has had the option of performing an alternate source demonstration, and the Director has not determined that the constituents are from a source other than the landfill.
2-398	The City of Virginia Beach states that the release factor should not automatically be assigned a high score when a SSI has occurred and a facility has entered assessment monitoring. Failure to evaluate site specific conditions and constituent concentrations in monitoring wells is vital to any relative ranking and is prejudicial against facilities with site specific conditions which preclude any real threat to public health and safety.	The Department did not evaluate well-by-well data sets to compare ground water conditions at facilities in this Prioritization. The Department reviews ground water monitoring annual reports to evaluate ground water conditions at facilities. The Department did use the overall conclusions that a facility's ground water data supports. If a facility has detected a statistically significant increase, the Department believes there is need for additional monitoring and scrutiny of the ground water in the area of the facility. Statistically significant increases indicate that ground water conditions at facilities have changed and may signify that a release has occurred. This criteria has been consistently applied to all facilities.
2-398	The City of Virginia Beach states that applicability is absolutely necessary for relative prioritization of risk. The City of Virginia Beach states that it is misleading to suggest that the referenced regulatory authority for setback criteria represent and regulatory authority for the present purpose (ranking the relative risk associated with HB 1205 waste units.)	The Department used current siting criteria for landfills in the model to prioritize sites for closure. Siting criteria must be followed when siting a new facility in order to protect human health and the environment. By using these standard setbacks, the Department was able to use the same criteria to evaluate all sites. All sites were evaluated using identical factors.

2-398	The City of Virginia Beach states that failure of the model to account for conditions that make pathways incomplete or truncated and resulting 'effective' setback is necessary to remove prejudicial bias of the model and unfair characterization of facility's that otherwise represent no risk to public health.	The Department cannot concur. The model examines the threat that a pathway poses to human health and the environment, including the potential for a complete pathway. The Department's model does take into consideration the fact that a low potential threat does not equal zero potential threat. All facilities are evaluated using the same criteria to evaluate their potential threat to human health and the environment.
2-398	The City of Virginia Beach states that the physiographic relationship simply does not correlate with the probability of contaminating the uppermost aquifer for any given site particularly given site specific conditions that affect potential fate and transport of hypothetical contaminants. The previously suggested alternative is to delete the rationale from the model given that it is inappropriate and rely instead on site specific factors that more fairly and uniformly evaluate the probability of ground water contamination as a basis for relative risk and prioritization.	The model uses characteristics found in the different physiographic ground water regions of the state when scoring the ground water route factor. Ground water behavior and the underlying geology of the region play an important role in determining the route that the contaminants would take after a release occurs. The model evaluates all facilities in the prioritization using factors and site data available for all sites. The model does not consider how far a contaminant would have to travel to leave the facility boundary, or how fast the contaminants travel. The model evaluates the potential that a contaminant will be released, how it will travel, and where the receptors of the contamination are. When all facilities are compared using the same data, facilities can be prioritized in relationship to one another.
2-398	The City of Virginia Beach states that the water table aquifer is no longer generally used as a potable water supply in the Coastal Plane due to the natural undesirable quality for shallow ground water. We reiterate a more realistic assessment of potential impacts is necessary based upon site specific conditions. Failure to address site specific conditions unfairly characterizes otherwise low risk facilities located in the coastal plane physiographic region.	The Department considers all ground water in Virginia as a potential source of drinking water. The Department's mission is to protect human health and the environment, and the facilities have been prioritized on that basis.

2-398	The City of Virginia Beach states that the stream-lined methodology uses non-site specific data inputs that tend to overestimate release, route, and receptor factors for any given exposure pathway. This is particularly true of the City's facility where the methodology, through failure to consider site specific inputs and effective setbacks, unfairly characterizes the facility when more sophisticated analysis confirm no public health risk.	The Department cannot concur. The model uses site specific data available for all facilities, including the City's, to prioritize sites for closure. Pursuant to statutory directive, the Department is prioritizing sites according to their threat to human health and the environment. By directing the Department to undertake this prioritization and closure schedule, the General Assembly has indicated that older landfills pose a greater threat than facilities meeting current, Subtitle D standards.
2-398	The City of Virginia Beach reiterates that incomplete or truncated pathways should score Low.	The pathway scoring algorithm scores a pathway based on its three factors (release, route, and receptor). However, due to uncertainty inherent in the qualitative parameters (e.g., *low* does not necessarily mean negligible), some question would remain whether the pathway is truly incomplete, even if one factor is *low*. Because of this, the algorithm is defined to be moderately conservative: if any factor is *low*, the pathway cannot be *high*; and if any factor is *high*, the pathway cannot be *low*. The algorithm is not based on a simple arithmetic average, but rather generally follows more formal risk assessment methods that quantify risks along complete pathways to receptors. The resulting pathway score provides a relative measure of the threat associated with that pathway.
2-398	The City of Virginia Beach reiterates their concern that the model unfairly characterized the facility even though more sophisticated analysis indicate there is no public health risk. How does the Department justify ranking a facility with no public health risk as medium or high priority for closure?	The Department has prioritized facilities according to greatest threat to human health and the environment. The same criteria are applied to all sites in the Prioritization. The site has been re-scored using updated information.

2-398	The City of Virginia Beach reiterates that the model unfairly characterizes the City's facility due to its utilization of non-specific data inputs and failure to account for incomplete or truncated pathways.	See responses above.
2-398	The City of Virginia Beach states that it is intuitively obvious that a facility which more sophisticated analyses indicates poses no risk to public health and safety cannot be characterized as Medium or High priority for closure. The model's utilization of non-site specific data inputs and failure to consider impact of truncated or incomplete pathways is not objective but rather subjective, prejudicial and arbitrary inasmuch as it unfairly prioritizes a facility with no risk as representing Medium or High priority for closure.	The Department has carried out its statutory mandate to prioritize sites based on the greatest threat to human health and the environment. It has done so using objective and consistent criteria, applied to this facility and all others. The site has been re-scored using updated information.

2-398	The City of Virginia Beach states that the mere fact that the facility has entered into the assessment monitoring program does not confirm the facility is impacting the environment. The City maintains that its score for ground water release should be changed from high to low. The release factor is scored high on the basis of the facility being presently engaged in assessment monitoring with no consideration given to natural attenuation or other active control measures that may be readily utilized within the facility limits under control of the City. The effective result of natural attenuation within the facility buffer zone is to mitigate any impact on public health and the environment as evidenced by results of site specific REAMS analysis which represents a more sophisticated tool also developed by the Department.	As a result of detecting a statistically significant increase in constituents, the facility implemented an assessment monitoring program in 1997. Monitoring data indicates that constituents are being detected. The facility has had the option of performing an alternate source demonstration, and the Director has not determined that the constituents are from a source other than the landfill. Additionally, the facility has not implemented a corrective action program at the facility. The Department is not considering measures that may be implemented in the future to control releases to ground water.

2-398	The City of Virginia Beach states that it is in receipt of a letter for the Department concurring the facility is not required to monitor ground water quarterly in accordance with Va., Code 10.1-1408.5 requirements due to hydraulic isolation attributable to extensive borrow pit dewatering activities which produce incomplete or truncated pathway or hydraulic isolation. Although the Department's revised score shows the facility is greater than 1 mile from wetlands the Department has at the same time used this information [which was attributable to incomplete/truncated pathway due to extensive borrow pit dewatering activities] to increase the facility's ground water pathway score. We find it inconsistent the Department can agree the borrow pit dewatering isolates the facility from wetlands while at the same time does not agree the same dewatering activities provide truncated or incomplete ground water pathway.	The facility's wetland demonstration is contingent upon continued dewatering activities in the area. Since the City cannot control these off-site activities that impact the ground water flow at the site, and since dewatering activities may be discontinued at the Williams Gravel Pit at any time, the Department is not able to state that the ground water will always be isolated from potential contamination from the site. The Department's letter approving the wetland demonstration states that the facility's demonstration will be re-evaluated when the dewatering activities at the site change. Additionally, the facility's permit states "It is not known how long the Williams pit will be in operation, though it is anticipated that the pit will close before landfilling activities cease. Borrow area 2 will cease operation concurrently with landfill activities. Dewatering will cease when the respective quarrying activities cease, thereby allowing the water table to return to it's natural configuration." This supports not using the modified ground water flow in the model.
2-398	The Department's response implies that other facility's inability to provide site specific data inputs precludes Department utilization of site specific data inputs at Landfill #2.	In order to perform a valid, objective prioritization, all facilities must be examined using the same information. In order to perform an accurate, impartial prioritization of sites, the Department developed a model to evaluate the greatest threat for the air, soil, ground water and surface water to be impacted by a facility. This model was applied consistently and objectively to all facilities.

2-398	The City of Virginia Beach states that dewatering activities should be considered in the model. Failure to use site-specific data inputs and incomplete or truncated pathways unfairly characterizes a facility which otherwise poses no risk to public health. In addition, the borrow pits represent incomplete or truncated pathway independent of dewatering activities.	The facility's permit states "It is not known how long the Williams pit will be in operation, though it is anticipated that the pit will close before landfilling activities cease. Borrow area 2 will cease operation concurrently with landfill activities. Dewatering will cease when the respective quarrying activities cease, thereby allowing the water table to return to it's natural configuration." When dewatering activities cease, ground water flow at the facility will change. Dewatering activities are not controlled by the City and cannot be considered when evaluating the long term future configuration of the ground water. Also contrary to the City's claim, site specific data was used to prioritize facilities for closure.
2-398	The City of Virginia Beach states that the distance to a drinking water source should be re-scored to greater than 15 miles.	The Department has revised the site score sheet to reflect that the surface water drinking intake is greater than 15 miles away from the facility.
2-398	The City of Virginia Beach states that the Department should review the REAMS model to verify the application and use site-specific data inputs such as REAMS based risk assessments in their evaluation of prioritizing facilities for closure. It is intuitive that a facility that has been demonstrated to pose no risk to public health should not be prioritized for closure.	The Department is not performing risk assessments on facilities included in the prioritization. All facilities were compared using information readily available for all facilities. The parameters examined when prioritizing the sites have been listed and discussed with the facilities. An analysis using REAMS is not consistent with the evaluations performed on the other facilities included in the Prioritization. Therefore, an objective comparison could not be made between the Virginia Beach Landfill and the other facilities included in the Prioritization.
2-398	The City of Virginia Beach thanks the Department for changing the site's score sheet to reflect that the aquatic target length being greater than 1 mile.	In response to a previous comment received, the Department stated the aquatic target length for this facility would be changed on the site score sheet to be greater than a mile. However, after re-examining the site, the Department has concluded that the correct aquatic target length for this site is

		.1 to 1 mile. The site score sheet reflects the correct aquatic target length.
2-398	The City of Virginia Beach states that the receptor factor for surface water is more appropriately scored low given the effective large setback attributable to separate drainage basins. In addition Department inspectors have confirmed that the facility does not discharge surface water via outfalls to Stumpy Lake.	The Department has revised the site score sheet to reflect that the site does not drain to the Stumpy Lake drainage basin, where the potential drinking water intake is located. This was confirmed by Department staff during a May 2001 site visit.
2-398	The City of Virginia Beach states that effective setback distances should be used in recognition of site-specific conditions which result in incomplete or truncated pathways. Failure of the model to utilize site-specific data inputs is prejudicial and arbitrarily characterizes a facility as Medium or High priority for closure when the facility otherwise poses no risk to public health.	The Department cannot concur. The model uses site-specific data available for all facilities to prioritize sites for closure. The Department, through this prioritization, is prioritizing sites according to the greatest threat to human health and the environment.
2-398	The City of Virginia Beach maintains that the facility should have an overall score of Low based on site-specific data inputs.	The Department has updated the site score sheet to reflect conditions at the site and has re-evaluated the site's score.

2-398	The City of Virginia Beach submitted a summary of gas monitoring results showing gas monitoring results on May 14, May 16, and May 17 of 2001 for 18 gas monitoring wells. The data collected shows that methane was not detected in these monitoring wells.	The Prioritization evaluates the landfill gas corrective action installed at the facility. The landfill gas corrective action feature is scored "yes" if a facility has installed a landfill gas control system that has reduced methane concentrations at property boundaries to below the lower explosive limit (LEL). The gas extraction and control system installed by the City of Virginia Beach has shown through complete monitoring data that methane concentrations at the property boundary are consistently below the lower explosive limit. The site score sheet has been changed to reflect that the site's active landfill gas extraction system is controlling landfill gas. The site has been re-scored using this data.

Commenters on the Revised Prioritization

Listed below are persons, parties, and organizations that submitted comments during comment period on the Revised Prioritization. A commenter code is assigned to each commenter and can be used to identify the comments submitted by the commenter.

Commenter Number	Commenter	Representing	Address
2-91	Mr. Michael Freitas Director of Public Works	County Accomack	PO Box 388 Accomac, VA 23301
2-545	Mr. Ed Morshedi	Henrico County	PO Box 27032 Richmond, VA 23273
2-86	Mr. Andy Carroll County Administrator	Appomattox County	PO Box 863 Appomattox, VA 24522
2-29	Mr. Thomas Smith Solid Waste Division Chief	Prince William County	4379 Ridgewood Center Drive Prince William, VA 22192
2-92	Mr. Joseph Morgan County Administrator	Halifax County	PO Box 699 Halifax, VA 24558
2-31	Mr. Jeffrey M. Fantell Project Engineer	Joyce Engineering	4808 Radford Avenue Richmond, VA 23230
2-49	Ms. Janis D. McHargue Project Engineer	Joyce Engineering	2301 W. Meadowview Rd. Suite 203 Greensboro, NC 27407
2-429	Mr. Edward J. Hollos Project Engineer	Draper Aden Associates	8090 Villa Park Drive Richmond, VA 23228
2-398	Mr. Steve R. Nesbit Project Engineer	Malcolm Pirnie	11832 Rock Landing Dr. Suite 400 Newport News, VA 23606